



DART AEROSPACE USA, INC.
19717 62nd Ave. South
Suite E-101
Kent, WA 98032

Tel: 1 613 632 5200
Fax: 1 613 632 5246

e-mail: heli@dartaero.com
<http://www.dartaero.com>

INSTALLATION INSTRUCTIONS

IIN-D212-803

Left-Hand Pilot in Command

BELL 205/212/412 MODELS

Prepared By: _____
V. Seib
Mechanical Designer

Checked By: _____
H. Siemens
Mechanical Designer

Released By: _____
D. Shepherd, P. Eng
Chief Engineer

REVISION RECORD

Revision	Issue Date	Description
A	11.05.19	New Issue
B	12.07.16	Add instructions re assembly with Proseal. Update figures & Parts List
C	14.02.03	Add -111/-113/-115/-117/-119/-121/-123 kits, Update Parts List, add Fasteners paragraph in Section 2, update figures. Ref. PAR 13-295 and CIR 13-25.
D	14.09.18	Add -211/-213/-215/-217/-219/-221/-223 kits, Update Figures and Parts List, Add Bell 412 kits

1. INTRODUCTION

These instructions describe the installation of the Dart D205-803 and D212-803 Left Hand Pilot in Command kits for the Bell 205/212/412 series aircraft.

The purpose of this modification is to bring the left-hand pilot position to the same operational level as the right-hand pilot position. This will allow the aircraft to be operated with the Pilot in Command seated in either position with the installation of redundant instrumentation, flight controls, and control mounted switches.

The **Dart D205-803-011/-013 Left Hand Pilot in Command** kit is for Bell 205 models. The -011 kit includes a replacement collective head as well as all the required switches and connectors. The -013 kit does not include any of the switches or other electrical components in the event that the customer already has acquired these components.

NOTE: It is the responsibility of the installer to acquire and install the Bell Dual Control kit, Co-pilot Instruments, and the Dart Emergency Cargo Release kit p/n D205-704-013 or similar approved emergency cargo release kit. Further details of these required kits are supplied in Section 3.1.

The **Dart D212-803-015/-017 Left Hand Pilot in Command** kit is for Bell 212/412 models. The -015 kit includes a replacement collective head as well as all the required switches and connectors. The -017 kit does not include any of the switches or other electrical components in the event that the customer already has acquired these components.

NOTE: It is the responsibility of the installer to acquire and install the Bell Dual Control kit, Co-pilot Instruments, and the Dart Emergency Cargo Release kit p/n D412-704-011 or similar approved emergency cargo release kit. Further details of these required kits are supplied in Section 3.3.

The **Dart D212-803-019 Left Hand Pilot in Command** kit is for Bell 212 models modified per FAA STC SR02831NY / TC STC SH07-28.

NOTE: It is the responsibility of the installer to acquire and install the Dart Co-pilot Instrument kit p/n DSB-D212-725-2-011 and the Dart Emergency Cargo Release kit p/n D412-704-011 or similar approved emergency cargo release kit. Further details of these required kits are supplied in Section 3.5.

The **Dart D205-803-111/-113 Left Hand Pilot in Command** kit is for Bell 205 models. The collective head in the -111/-113 kits are a more compact design than the -011/-013 kits. The -111 kit includes a replacement collective head as well as all the required switches and connectors. The -113 kit does not include any of the switches or other electrical components in the event that the customer already has acquired these components and may also act as a replacement if the -011 kit or -013 kit has been installed.

NOTE: It is the responsibility of the installer to acquire and install the Bell Dual Control kit, Co-pilot Instruments, and the Dart Emergency Cargo Release kit p/n D205-704-013 or similar approved emergency cargo release kit. Further details of these required kits are supplied in Section 3.6.

The **Dart D212-803-115/-117 Left Hand Pilot in Command** kit is for Bell 212/412 models. The collective head in the -115/-117 kits are a more compact design than the -015/-017 kits. The -115 kit includes a replacement collective head as well as all the required switches and connectors. The -117 kit does not include any of the switches or other electrical components in the event that the customer already has acquired these components and may also act as a replacement if the -015 kit or -017 kit has been installed.

NOTE: It is the responsibility of the installer to acquire and install the Bell Dual Control kit, Co-pilot Instruments, and the Dart Emergency Cargo Release kit p/n D412-704-011 or similar approved emergency cargo release kit. Further details of these required kits are supplied in Section 3.8.

The **Dart D212-803-119 Left Hand Pilot in Command** kit is for Bell 212 models modified per FAA STC SR02831NY / TC STC SH07-28. The collective head in the -119 kit is a more compact design than the -019 kit and may act as a replacement for the -019 kit.

NOTE: It is the responsibility of the installer to acquire and install the Dart Co-pilot Instrument kit p/n DSB-D212-725-2-011 and the Dart Emergency Cargo Release kit p/n D412-704-011 or similar approved emergency cargo release kit. Further details of these required kits are supplied in Section 3.10.

The **Dart D205-803-121/-123 Left Hand Pilot in Command** kit is for Bell 205 models with the 204-001-290-5 Stick and Throttle Assy installed. The -121 kit includes a replacement collective head as well as all the required switches and connectors. The -123 kit does not include any of the switches or other electrical components in the event that the customer already has acquired these components.

NOTE: It is the responsibility of the installer to acquire and install the Bell Dual Control kit, Co-pilot Instruments, and the Dart Emergency Cargo Release kit p/n D205-704-013 or similar approved emergency cargo release kit. Further details of these required kits are supplied in Section 3.11.

The **Dart D205-803-211/-213 Left Hand Pilot in Command** kit is for Bell 205 models. The -211 kit includes an improved midsize collective head as well as all the required switches and connectors. The -213 kit does not include any of the switches or other electrical components in the event that the customer already has acquired these components and may also act as a replacement if the -011 or -013 or -111 or -113 kit has been installed.

NOTE: It is the responsibility of the installer to acquire and install the Bell Dual Control kit, Co-pilot Instruments, and the Dart Emergency Cargo Release kit p/n D205-704-013 or similar approved emergency cargo release kit. Further details of these required kits are supplied in Section 3.12.

The **Dart D212-803-215/-217 Left Hand Pilot in Command** kit is for Bell 212/412 models. The -215 kit includes an improved midsize collective head as well as all the required switches and connectors. The -217 kit does not include any of the switches or other electrical components in the event that the customer already has acquired these components and may also act as a replacement if the -015 or -017 or -115 or -117 kit has been installed.

NOTE: It is the responsibility of the installer to acquire and install the Bell Dual Control kit, Co-pilot Instruments, and the Dart Emergency Cargo Release kit p/n D412-704-011 or similar approved emergency cargo release kit. Further details of these required kits are supplied in Section 3.13.

The **Dart D212-803-219 Left Hand Pilot in Command** kit is for Bell 212 models modified per FAA STC SR02831NY / TC STC SH07-28. The collective head in the -219 kit may act as a replacement for the -019 or -119 kit.

NOTE: It is the responsibility of the installer to acquire and install the Dart Co-pilot Instrument kit p/n DSB-D212-725-2-011 and the Dart Emergency Cargo Release kit p/n D412-704-011 or similar approved emergency cargo release kit. Further details of these required kits are supplied in Section 3.14.

The **Dart D205-803-221/-223 Left Hand Pilot in Command** kit is for Bell 205 models with the 204-001-290-5 Stick and Throttle Assy installed. The -221 kit includes an improved midsize collective head as well as all the required switches and connectors. The -223 kit does not include any of the switches or other electrical components in the event that the customer already has acquired these components.

NOTE: It is the responsibility of the installer to acquire and install the Bell Dual Control kit, Co-pilot Instruments, and the Dart Emergency Cargo Release kit p/n D205-704-013 or similar approved emergency cargo release kit. Further details of these required kits are supplied in Section 3.15.

The components in the Dart D205-803 and D212-803 kits are defined in Section 5.0 of these instructions. For convenience, only the last three digits of the part numbers are listed on the top row of each table. The quantity of each component which is included in the D205-803-011 kit, for example, is as defined in the column labeled -011.

2. GENERAL NOTES

COMPATIBILITY

Compatibility of this installation with the aircraft is the **responsibility of the installer**. Ensure that this installation does not conflict with a previous modification.

WORKMANSHIP

Unless otherwise stated, all workmanship should be to the standards set by the Aircraft Maintenance Manual.

CONTINUING AIRWORTHINESS

This installation should be maintained in accordance with the Instructions for Continued Airworthiness ICA-D212-803.

TORQUES

Size	Torque
#6	9-12 IN-LBS (1.0-1.3 N-m)
#10	20-25 IN-LBS (2.3-2.8 N-m)

Table 1 – Maximum Torque on Fasteners

FASTENERS

Although not generally necessary, it is acceptable to use longer or shorter bolts/screws to ensure 1.5-4 threads in safety on the nuts. Additional washers may also be installed under the nuts.

3. INSTALLATION PROCEDURE

3.1 Installation of D205-803-011 Left-Hand Pilot in Command Kit, (Complete)

3.1.1 Modify the aircraft in accordance with Bell S.I. 205-1 Dual Controls. Do not install Switch Box Assembly (Bell p/n 205-001-124-1), Conduit (Bell p/n 205-001-120-1), or related hardware.

3.1.2 The following instruments must be installed on the co-pilot's side of the aircraft:

- An airspeed indicator;
- A sensitive altimeter;
- A non-tumbling gyroscopic bank and pitch indicator;
- A gyroscopic rate of turn indicator combined with an integral slip-skid indicator;
- A gyroscopic direction indicator;
- A rate-of-climb indicator

These instruments should be installed per Bell SI 205-3 or Bell SI 205-43 based on aircraft serial number.

3.1.3 Install the Dart D205-704-013 Co-Pilot's Emergency Cargo Release Kit per FAA STC SR00957NY / TC STC SH93-34 or similar approved emergency cargo release kit.

3.1.4 Attach Placard D4411-1 to Face Plate (p/n D4410-3). See Figure 2 for location.

3.1.5 Install engine start switch (p/n 2PB744-T2) into Co-Pilot Collective Head Assembly (p/n D4410-041) per Figure 1; BHT-205A1-MM-1 Chapter 98, Figure 15, Starter Generator and Bus Wiring Diagram; and Dart drawing D205-803-901.

3.1.6 Install Trigger (p/n D4410-9) using Pin (p/n MS20253-1-065) into Co-Pilot Collective Head Assembly (p/n D4410-041). Install Setscrew (p/n AN565F8H9) and Nut (p/n MS21042L08) into Trigger as shown in Figure 1. Ensure that the Trigger can move freely; it may be necessary to file a small amount of material off the mounting lugs on the Co-Pilot Collective Head Assembly. Tighten the Setscrew so that the Trigger sits flush against the engine start switch button (p/n 2PB744-T2). Ensure that activating the Trigger will depress the engine start switch button and that the engine start switch button can fully extend when the Trigger is released.

3.1.7 Remove engine governor RPM switch (p/n 13AT66) from the Switch Box Assembly (Bell p/n 205-001-124-1) and install into Face Plate (p/n D4410-3) per Figure 1; BHT-205A1-MM-1 Chapter 98, Figure 18, Governor RPM (N2) Wiring diagram; and Dart drawing D205-803-901. It will be necessary to de-pin the wires from the P107 connector plug.

3.1.8 Install idle stop switch (p/n C100E2-39) into Face Plate (p/n D4410-3) per Figure 1 and Dart drawing D205-803-901.

3.1.9 Space has been provided for the customer to install optional longline release switches on the Face Plate (p/n D4410-3). The switches and related longline system must be installed per the manufacturer's approved installation instructions. **Approval for switches and related longline system is the responsibility of the installer.**

3.1.10 Remove Pin (p/n MS171539) from D4410-041 Co-Pilot Collective Head Assembly. Install D4410-041 Co-Pilot Collective Head Assembly onto Stick Assembly (Bell p/n 205-001-117-1) wet with Proseal 890 or equivalent using Pin (p/n MS171539) per Figure 3. Apply Aircraft Primer to Pin. Secure loose end of D4410-7 Conduit to Stick Assembly using hardware as shown in Figure 4. Hand form D4410-7 Conduit as necessary to secure to Stick Assembly.

- 3.1.11 Route new wires with existing wires down conduit (p/n D4410-7) and terminate at plug LHPIC-P1.
- 3.1.12 De-pin socket J107 and connect to LHPIC-J1 in accordance with Dart drawing D205-803-901.
- 3.1.13 Mount bulkhead socket LHPIC-J1 to web at station 52 where socket J107 was previously mounted. Connect plug LHPIC-P1 to socket LHPIC-J1.
- 3.1.14 Attach Face Plate (p/n D4410-3) to Co-Pilot Collective Head Assembly (p/n D4410-041) using hardware as indicated in Figure 1. See Figure 2 for front view of installed switches.
- 3.1.15 Perform a functional check of the electric switches on the co-pilot's collective stick.
- 3.1.16 Attach Placard p/n D4411-7 to instrument panel in clear view of co-pilot.
- 3.1.17 Insert FMS-D212-803 into Rotorcraft Flight Manual.

3.2 **Installation of D205-803-013 Left-Hand Pilot in Command Kit (Mechanical Only)**

- 3.2.1 This kit is identical to the D205-803-011 kit except that the switches, connectors and other electrical components are not included. It is the installer's responsibility to acquire the following components:

Qty	Part Number	Description
1	2PB744-T2	SWITCH
1	C100E2-39	SWITCH
14	M39029/31-240	PIN
14	M39029/32-259	SOCKET
1	MS3126E14-19P	PLUG
1	MS3120E14-19S	SOCKET

- 3.2.2 Follow the steps provided in Section 3.1.

3.3 **Installation of D212-803-015 Left-Hand Pilot in Command Kit (Complete)**

- 3.3.1 If installing on a Bell 212, modify the aircraft in accordance with Bell S.I. 212-4 Dual Controls (S/N 30504 thru 35068) or Bell S.I. 212-89 Dual Controls (S/N 35069 and subsequent). Do not install Box (Bell p/n 212-001-148-3), Conduit (Bell p/n 212-001-169-1), or related hardware.
- 3.3.2 If installing on a Bell 412, modify the aircraft in accordance with Bell S.I. 412-SI-13 Dual Controls. Do not install Box (Bell p/n 212-001-148-003), Conduit (Bell p/n 212-001-169-001), or related hardware.
- 3.3.3 The following instruments must be installed on the co-pilot's side of the aircraft:
- An airspeed indicator;
 - A sensitive altimeter;
 - A non-tumbling gyroscopic bank and pitch indicator;
 - A gyroscopic rate of turn indicator combined with an integral slip-skid indicator;
 - A gyroscopic direction indicator;
 - A rate-of-climb indicator

These instruments should be installed per Bell SI 212-1 or Bell SI 212-41 based on aircraft serial number or Bell SI 412-10.

- 3.3.4 Install the Dart D412-704-011 Co-Pilot's Emergency Cargo Release Kit per FAA STC SR00957NY / TC STC SH93-34 or similar approved emergency cargo release kit.

- 3.3.5 If the aircraft **has not** been modified in accordance with Bell Technical Bulletin TB 212-91-138 (212) or TB 412-93-118 (412), then attach Placard p/n D4411-3 to Faceplate (p/n D4410-5). If the aircraft **has been** modified in accordance with Bell Technical Bulletin TB 212-98-138 (212), or TB 412-93-118 (412), or is a Bell 412 S/N 36020 to 36086 and subsequent or is modified for improved hover performance with PT6T-3BE Engines and 5 minute takeoff power rating (412-570-001-103), then attach Placard p/n D4411-5 to Faceplate (p/n D4410-5). See Figure 6 for location.
- 3.3.6 Install engine start switch (p/n 27ET51-T) into Face Plate (p/n D4410-5) per Figure 5; and Dart drawing D212-803-903 for the 212 or D412-803-905 for the 412. Install Diode Assemblies (p/n 30-037-26, qty. 3 & p/n 30-037-3, qty. 2) into Terminal Board (MS27212-1-3) using Strip (MS3373-A1), Washer (AN961-6T) and Nut (MS21042L06) as required.
- 3.3.7 If installing on a 212 and if the aircraft has not been modified in accordance with Bell Technical Bulletin TB 212-91-138, then remove the engine governor RPM switch (p/n 13AT66) from the Box (Bell p/n 212-001-148-3) and install into Face Plate (p/n D4410-5) per Figure 5; BHT-212-MM Chapter 98, Figure 18, Governor RPM Wiring diagram; and Dart drawing D212-803-903. It will be necessary to de-pin the wires from the P49 connector plug.
- 3.3.8 If installing on a 412 and if the aircraft has not been modified in accordance with Bell Technical Bulletin TB 412-93-118, then remove the engine governor RPM switch (p/n 13AT66) from the Box (Bell p/n 212-001-148-3) and install into Face Plate (p/n D4410-5) per Figure 5; BHT-412-MM Chapter 98, Figure 29 for S/N 33001 through 33100, Figure 30 for S/N 33101 through 33107 or Figure 31 for S/N 33108 through 33213 and 36001 through 36019, Governor RPM Wiring diagram; and Dart drawing D412-803-905. It will be necessary to de-pin the wires from the P49 connector plug.
- 3.3.9 If installing on a 212 and if the aircraft has been modified in accordance with Bell Technical Bulletin TB 212-91-138, then install engine governor RPM switch (p/n 51MXY-5-J) into Face Plate (p/n D4410-5) per Figure 5; and Dart drawing D212-803-903.
- 3.3.10 If installing on a 412 and if the aircraft has been modified in accordance with Bell Technical Bulletin TB 412-93-118, or is S/N 36020 to 36086 and subsequent or is modified for improved hover performance with PT6T-3BE Engines and 5 minute takeoff power rating (412-570-001-103) then install engine governor RPM switch (p/n 51MXY-5-J) into Face Plate (p/n D4410-5) per Figure 5; and Dart drawing D412-803-905.
- 3.3.11 Install idle stop switch into Face Plate (p/n D4410-5) per Figure 5 and Dart dwg D212-803-903 for a 212 and D412-803-905 for a 412.
- 3.3.12 Space has been provided for the customer to install optional longline release switches on the Face Plate (p/n D4410-5). The switches and related longline system must be installed per the manufacturer's approved installation instructions. **Approval for switches and related longline system is the responsibility of the installer.**
- 3.3.13 Remove Pin (p/n MS171599) from D4410-043 Co-Pilot Collective Head Assembly. Install D4410-043 Co-Pilot Collective Head Assembly onto Stick Assembly (Bell p/n 212-001-117-1) wet with Proseal 890 or equivalent using Pin (p/n MS171599) per Figure 8. Apply Aircraft Primer to Pin. Secure loose end of D4410-7 Conduit to Stick Assembly using hardware as shown in Figure 4. Hand form D4410-7 Conduit as necessary to secure to Stick Assembly.
- 3.3.14 Route new wires with existing wires down conduit (p/n D4410-7) and terminate at plug LHPIC-P1.
- 3.3.15 De-pin socket J49 and connect to LHPICJ1 in accordance with Dart drawing D212-803-903.

- 3.3.16 Mount bulkhead socket LHPIC-J1 to web at station 52 where socket J49 was previously mounted. Connect plug LHPIC-P1 to socket LHPIC-J1.
- 3.3.17 Attach Face Plate (p/n D4410-5) to Co-Pilot Collective Head Assembly (p/n D4410-043) using hardware as indicated in Figure 5. See Figures 6 and 7 for front view of installed switches.
- 3.3.18 Perform a functional check of the electric switches on the co-pilot's collective stick.
- 3.3.19 Attach Placard p/n D4411-7 to instrument panel in clear view of co-pilot.
- 3.3.20 Insert FMS-D212-803 into Rotorcraft Flight Manual.

3.4 **Installation of D212-803-017 Left-Hand Pilot in Command Kit (Mechanical Only)**

- 3.4.1 This kit is identical to the D212-803-015 kit except that the switches, connectors and other electrical components are not included. It is the installer's responsibility to acquire the following components:

Qty	Part Number	Description
1	27ET51-T	SWITCH (ALT P/N 212-075-153-3)
3	30-037-26	DIODE ASSEMBLY
2	30-037-3	DIODE ASSEMBLY
3	AN961-6T	WASHER
1	51MXY-5-J	SWITCH
AR (21)	M39029/31-240	PIN
AR (21)	M39029/32-259	SOCKET
AR (2)	M39029/31-228	PIN
AR (2)	M39029/32-247	SOCKET
3	MS21042L06	NUT
1	MS24523-27	SWITCH
1	MS27212-1-3	TERMINAL BOARD
2	MS3126E16-99P	PLUG
1	MS3120E16-99S	SOCKET
3	MS3373-A1	STRIP

- 3.4.2 Follow the steps provided in Section 3.3.

3.5 **Installation of D212-803-019 Left-Hand Pilot in Command Kit** **(Bell 212 modified per FAA STC SR02831NY / TC STC SH07-28)**

- 3.5.1 Modify the aircraft in accordance with Dart Service Bulletin DSB-D212-725-2 Co-pilot Instruments.
- 3.5.2 Install the Dart D412-704-011 Co-Pilot's Emergency Cargo Release Kit per FAA STC SR00957NY / TC STC SH93-34 or similar approved emergency cargo release kit.
- 3.5.3 Attach Placard D4411-1 to Face Plate (p/n D4410-3). See Figure 2 for location.
- 3.5.4 Remove engine start switch (p/n 2PB744-T2) from Box Assembly (Bell p/n 204-001-243-001) and install into Co-Pilot Collective Head Assembly (p/n D4410-041) per Figure 1 and Dart drawing D212-725-2/-2G2 Figure 98-14S Engine Start. It will be necessary to de-pin the wires from the P49 connector plug.
- 3.5.5 Install Trigger (p/n D4410-9) using Pin (p/n MS20253-1-065) into Co-Pilot Collective Head Assembly (p/n D4410-045). Install Setscrew (p/n AN565F8H9) and Nut (p/n MS21042L08) into Trigger as shown in Figure 1. Ensure that the Trigger can move freely; it may be necessary to file a small amount of material off the mounting lugs on the Co-Pilot Collective Head Assembly. Tighten the Setscrew so that the Trigger sits flush against the engine start switch button (p/n 2PB744-T2).

Ensure that activating the Trigger will depress the engine start switch button and that the engine start switch button can fully extend when the Trigger is released.

- 3.5.6 Remove engine governor RPM switch (p/n 13AT66) from the Box Assembly (Bell p/n 204-001-243-001) and install into Face Plate (p/n D4410-3) per Figure 1 and Dart drawing D212-725-2/-2G2 Figure 98-18S Governor RPM. It will be necessary to de-pin the wires from the P49 connector plug.
- 3.5.7 Remove idle stop switch (p/n C100E2-39) from the Box Assembly (Bell p/n 204-001-243-001) and install into Face Plate (p/n D4410-3) per Figure 1 and Dart drawing D212-725-2/-2G2 Figure 98-15S Idle Stop. It will be necessary to de-pin the wires from the P49 connector plug.
- 3.5.8 Remove longline release and longline arm switches from the Box Assembly (Bell p/n 204-001-243-001) and install into Face Plate (p/n D4410-3). It will be necessary to cut out appropriately sized holes for the switches. Ensure that they are re-installed per Dart D212-725-2/-2G2 Figure 98-63S Copilot Collective Stick Wiring. **Approval for switches and related longline system is the responsibility of the installer.**
- 3.5.9 Remove Pin (p/n MS171599) from D4410-045 Co-Pilot Collective Head Assembly. Install D4410-045 Co-Pilot Collective Head Assembly onto Grip Assembly (Bell p/n 212-001-171-001) wet with Proseal 890 or equivalent using Pin (p/n MS171599) per Figure 9. Apply Aircraft Primer to Pin. Secure loose end of D4410-7 Conduit to Grip Assembly using hardware as shown in Figure 4. Hand form D4410-7 Conduit as necessary to secure to Grip Assembly.
- 3.5.10 Route wires down conduit (p/n D4410-7) and connect to plug P49.
- 3.5.11 Attach Face Plate (p/n D4410-3) to Co-Pilot Collective Head Assembly (p/n D4410-045) using hardware as indicated in Figure 1. See Figure 2 for front view of installed switches.
- 3.5.12 Perform a functional check of the electric switches on the co-pilot's collective stick.
- 3.5.13 Attach Placard p/n D4411-7 to instrument panel in clear view of co-pilot.
- 3.5.14 Insert Dart FMS-D212-803 into Rotorcraft Flight Manual.

3.6 Installation of D205-803-111 Left-Hand Pilot in Command Kit (Complete)

- 3.6.1 Modify the aircraft in accordance with Bell S.I. 205-1 Dual Controls. Do not install Switch Box Assembly (Bell p/n 205-001-124-1), Conduit (Bell p/n 205-001-120-1), or related hardware.
- 3.6.2 The following instruments must be installed on the co-pilot's side of the aircraft:
- An airspeed indicator;
 - A sensitive altimeter;
 - A non-tumbling gyroscopic bank and pitch indicator;
 - A gyroscopic rate of turn indicator combined with an integral slip-skid indicator;
 - A gyroscopic direction indicator;
 - A rate-of-climb indicator

These instruments should be installed per Bell SI 205-3 or Bell SI 205-43 based on aircraft serial number.

- 3.6.3 Install the Dart D205-704-013 Co-Pilot's Emergency Cargo Release Kit per FAA STC SR00957NY / TC STC SH93-34 or similar approved emergency cargo release kit.

- 3.6.4 Attach Placard D5055-1/-3 to the D5046-041 Co-Pilot Collective Head Assy. See Figure 10 for location.
- 3.6.5 Install engine start switch (p/n 2PB744-T2) into Co-Pilot Collective Head Assembly (p/n D5046-041) per Figure 11; BHT-205A1-MM-1 Chapter 98, Figure 15, Starter Generator and Bus Wiring Diagram; and Dart drawing D205-803-901.
- 3.6.6 Install Trigger (p/n D4410-9) using Pin (p/n MS20253-1-065) into Co-Pilot Collective Head Assembly (p/n D5046-041). Install Setscrew (p/n AN565F8H9) and Nut (p/n MS21042L08) into Trigger as shown in Figure 11. Ensure that the Trigger can move freely; it may be necessary to file a small amount of material off the mounting lugs on the Co-Pilot Collective Head Assembly. Tighten the Setscrew so that the Trigger sits flush against the engine start switch button (p/n 2PB744-T2). Ensure that activating the Trigger will depress the engine start switch button and that the engine start switch button can fully extend when the Trigger is released.
- 3.6.7 Remove engine governor RPM switch (p/n 13AT66) from the Switch Box Assembly (Bell p/n 205-001-124-1) and install into the Co-Pilot Collective Head Assy (p/n D5046-041) per Figure 11; BHT-205A1-MM-1 Chapter 98, Figure 18, Governor RPM (N2) Wiring diagram; and Dart drawing D205-803-901. It will be necessary to de-pin the wires from the P107 connector plug.
- 3.6.8 Install idle stop switch (p/n C100E2-39) into the Co-Pilot Collective Head Assy (p/n D5046-041) per Figure 11 and Dart drawing D205-803-901.
- 3.6.9 Space has been provided for the customer to install optional longline release switches on the Co-Pilot Collective Head Assy (p/n D5046-041). The switches and related longline system must be installed per the manufacturer's approved installation instructions. **Approval for switches and related longline system is the responsibility of the installer.**
- 3.6.10 Remove Pin (p/n MS171539) from D5046-041 Co-Pilot Collective Head Assembly. Install D5046-041 Co-Pilot Collective Head Assembly onto Stick Assembly (Bell p/n 205-001-117-1) wet with Proseal 890 or equivalent using Pin (p/n MS171539) per Figure 12. Apply Aircraft Primer to Pin. Secure loose end of D4410-7 Conduit to Stick Assembly using hardware as shown in Figure 4. Hand form D4410-7 Conduit as necessary to secure to Stick Assembly.
- 3.6.11 Route new wires with existing wires down conduit (p/n D4410-7) and terminate at plug LHPIC-P1.
- 3.6.12 De-pin socket J107 and connect to LHPIC-J1 in accordance with Dart drawing D205-803-901.
- 3.6.13 Mount bulkhead socket LHPIC-J1 to web at station 52 where socket J107 was previously mounted. Connect plug LHPIC-P1 to socket LHPIC-J1.
- 3.6.14 Attach Face Plate (p/n D5049-1) to Co-Pilot Collective Head Assembly (p/n D5046-041) using hardware as indicated in Figure 11. See Figure 10 for front view of installed switches.
- 3.6.15 Perform a functional check of the electric switches on the co-pilot's collective stick.
- 3.6.16 Attach Placard p/n D4411-7 to instrument panel in clear view of co-pilot.
- 3.6.17 Insert FMS-D212-803 into Rotorcraft Flight Manual.

3.7 **Installation of D205-803-113 Left-Hand Pilot in Command Kit (Mechanical Only)**

- 3.7.1 This kit is identical to the D205-803-111 kit except that the switches, connectors and other electrical components are not included. It is the installer's responsibility to acquire the following components:

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Revision: **D**

Date: 14.09.18

Qty	Part Number	Description
1	2PB744-T2	SWITCH
1	C100E2-39	SWITCH
14	M39029/31-240	PIN
14	M39029/32-259	SOCKET
1	MS3126E14-19P	PLUG
1	MS3120E14-19S	SOCKET

3.7.2 Follow the steps provided in Section 3.6.

3.8 Installation of D212-803-115 Left-Hand Pilot in Command Kit (Complete)

3.8.1 If installing on a Bell 212, modify the aircraft in accordance with Bell S.I. 212-4 Dual Controls (S/N 30504 thru 35068) or Bell S.I. 212-89 Dual Controls (S/N 35069 and subsequent). Do not install Box (Bell p/n 212-001-148-3), Conduit (Bell p/n 212-001-169-1), or related hardware.

3.8.2 If installing on a Bell 412, modify the aircraft in accordance with Bell S.I. 412-SI-13 Dual Controls. Do not install Box (Bell p/n 212-001-148-003), Conduit (Bell p/n 212-001-169-001), or related hardware.

3.8.3 The following instruments must be installed on the co-pilot's side of the aircraft:

- An airspeed indicator;
- A sensitive altimeter;
- A non-tumbling gyroscopic bank and pitch indicator;
- A gyroscopic rate of turn indicator combined with an integral slip skid indicator;
- A gyroscopic direction indicator;
- A rate-of-climb indicator

These instruments should be installed per Bell SI 212-1 or Bell SI 212-41 based on aircraft serial number or Bell SI 412-10.

3.8.4 Install the Dart D412-704-011 Co-Pilot's Emergency Cargo Release Kit per FAA STC SR00957NY / TC STC SH93-34 or similar approved emergency cargo release kit.

3.8.5 Attach Placard p/n D5055-5/-7 to the Co-Pilot Collective Head Assy (p/n D5046-043) per Figure 13. If the aircraft **has not** been modified in accordance with Bell Technical Bulletin TB 212-91-138 (212) or TB 412-93-118 (412), then attach Placard p/n D5055-3 to Co-Pilot Collective Head Assy (p/n D5046-043) per Figure 15. If the aircraft **has been** modified in accordance with Bell Technical Bulletin TB 212-98-138 (212), or TB 412-93-118 (412), or is a Bell 412 S/N 36020 to 36086 and subsequent or is modified for improved hover performance with PT6T-3BE Engines and 5 minute takeoff power rating (412-570-001-103), then attach Placard p/n D5055-9 to Co-Pilot Collective Head Assy (p/n D5046-043) per Figure 14.

3.8.6 Install engine start switch (p/n 27ET51-T) into Co-Pilot Collective Head Assy (p/n D5046-043) per Figure 16; and Dart drawing D212-803-903 for the 212 or D412-803-905 for the 412. Install Diode Assemblies (p/n 30-037-26, qty. 3 & p/n 30-037-3, qty. 2) into Terminal Board (MS27212-1-3) using Strip (MS3373-A1), Washer (AN961-6T) and Nut (MS21042L06) as required.

3.8.7 If installing on a 212 and if the aircraft has not been modified in accordance with Bell Technical Bulletin TB 212-91-138, then remove the engine governor RPM switch (p/n 13AT66) from the Box (Bell p/n 212-001-148-3) and install into Co-Pilot Collective Head Assy (p/n D5046-043) per Figure 16; BHT-212-MM Chapter 98, Figure 18, Governor RPM Wiring diagram; and Dart drawing D212-803-903. It will be necessary to de-pin the wires from the P49 connector plug.

- 3.8.8 If installing on a 412 and if the aircraft has not been modified in accordance with Bell Technical Bulletin TB 412-93-118, then remove the engine governor RPM switch (p/n 13AT66) from the Box (Bell p/n 212-001-148-3) and install into Co-Pilot Collective Head Assy (p/n D5046-043) per Figure 16; BHT-412-MM Chapter 98, Figure 29 for S/N 33001 through 33100, Figure 30 for S/N 33101 through 33107 or Figure 31 for S/N 33108 through 33213 and 36001 through 36019, Governor RPM Wiring diagram; and Dart drawing D412-803-905. It will be necessary to de-pin the wires from the P49 connector plug.
- 3.8.9 If installing on a 212 and if the aircraft has been modified in accordance with Bell Technical Bulletin TB 212-91-138, then install engine governor RPM switch (p/n 51MXY-5-J) into Co-Pilot Collective Head Assy (p/n D5046-043) per Figure 16; and Dart drawing D212-803-903.
- 3.8.10 If installing on a 412 and if the aircraft has been modified in accordance with Bell Technical Bulletin TB 412-93-118, or is S/N 36020 to 36086 and subsequent or is modified for improved hover performance with PT6T-3BE Engines and 5 minute takeoff power rating (412-570-001-103) then install engine governor RPM switch (p/n 51MXY-5-J) into Co-Pilot Collective Head Assy (p/n D5046-043) per Figure 16; and Dart drawing D412-803-905.
- 3.8.11 Install idle stop switch into Co-Pilot Collective Head Assy (p/n D5046-043) per Figure 16 and Dart dwg D212-803-903 for a 212 and D412-803-905 for a 412.
- 3.8.12 Space has been provided for the customer to install optional longline release switches on the Co-Pilot Collective Head Assy (p/n D5046-043). The switches and related longline system must be installed per the manufacturer's approved installation instructions. **Approval for switches and related longline system is the responsibility of the installer.**
- 3.8.13 Remove Pin (p/n MS171599) from D5046-043 Co-Pilot Collective Head Assembly. Install D5046-043 Co-Pilot Collective Head Assembly onto Stick Assembly (Bell p/n 212-001-117-1) wet with Proseal 890 or equivalent using Pin (p/n MS171599) per Figure 17. Apply Aircraft Primer to Pin. Secure loose end of D4410-7 Conduit to Stick Assembly using hardware as shown in Figure 4. Hand form D4410-7 Conduit as necessary to secure to Stick Assembly.
- 3.8.14 Route new wires with existing wires down conduit (p/n D4410-7) and terminate at plug LHPIC-P1.
- 3.8.15 De-pin socket J49 and connect to LHPICJ1 in accordance with Dart drawing D212-803-903 or D412-803-905.
- 3.8.16 Mount bulkhead socket LHPIC-J1 to web at station 52 where socket J49 was previously mounted. Connect plug LHPIC-P1 to socket LHPIC-J1.
- 3.8.17 Attach Face Plate (p/n D5049-1) to Co-Pilot Collective Head Assembly (p/n D5046-043) using hardware as indicated in Figure 16. See Figures 14 and 15 for front view of installed switches.
- 3.8.18 Perform a functional check of the electric switches on the co-pilot's collective stick.
- 3.8.19 Attach Placard p/n D4411-7 to instrument panel in clear view of co-pilot.
- 3.8.20 Insert FMS-D212-803 into Rotorcraft Flight Manual.
- 3.9 **Installation of D212-803-117 Left-Hand Pilot in Command Kit (Mechanical Only)**
- 3.9.1 This kit is identical to the D212-803-115 kit except that the switches, connectors and other electrical components are not included. It is the installer's responsibility to acquire the following components:

Qty	Part Number	Description
1	27ET51-T	SWITCH (ALT P/N 212-075-153-3)
3	30-037-26	DIODE ASSEMBLY
2	30-037-3	DIODE ASSEMBLY
3	AN961-6T	WASHER
1	51MXY-5-J	SWITCH
AR (21)	M39029/31-240	PIN
AR (21)	M39029/32-259	SOCKET
AR (2)	M39029/31-228	PIN
AR (2)	M39029/32-247	SOCKET
3	MS21042L06	NUT
1	MS24523-27	SWITCH
1	MS27212-1-3	TERMINAL BOARD
2	MS3126E16-99P	PLUG
1	MS3120E16-99S	SOCKET
3	MS3373-A1	STRIP

3.9.2 Follow the steps provided in Section 3.8.

3.10 Installation of D212-803-119 Left-Hand Pilot in Command Kit
(Bell 212 modified per FAA STC SR02831NY / TC STC SH07-28)

3.10.1 Modify the aircraft in accordance with Dart Service Bulletin DSB-D212-725-2 Co-pilot Instruments.

3.10.2 Install the Dart D412-704-011 Co-Pilot's Emergency Cargo Release Kit per FAA STC SR00957NY / TC STC SH93-34 or similar approved emergency cargo release kit.

3.10.3 Attach Placards D5055-1/-3 to Co-Pilot Collective Head Assy (p/n D5046-045). See Figure 10 for location.

3.10.4 Remove engine start switch (p/n 2PB744-T2) from Box Assembly (Bell p/n 204-001-243-001) and install into Co-Pilot Collective Head Assembly (p/n D5046-045) per Figure 11 and Dart drawing D212-725-2/-2G2 Figure 98-14S Engine Start. It will be necessary to de-pin the wires from the P49 connector plug.

3.10.5 Install Trigger (p/n D4410-9) using Pin (p/n MS20253-1-065) into Co-Pilot Collective Head Assembly (p/n D5046-045). Install Setscrew (p/n AN565F8H9) and Nut (p/n MS21042L08) into Trigger as shown in Figure 11. Ensure that the Trigger can move freely; it may be necessary to file a small amount of material off the mounting lugs on the Co-Pilot Collective Head Assembly. Tighten the Setscrew so that the Trigger sits flush against the engine start switch button (p/n 2PB744-T2). Ensure that activating the Trigger will depress the engine start switch button and that the engine start switch button can fully extend when the Trigger is released.

3.10.6 Remove engine governor RPM switch (p/n 13AT66) from the Box Assembly (Bell p/n 204-001-243-001) and install into Co-Pilot Collective Head Assy (p/n D5046-045) per Figure 11 and Dart drawing D212-725-2/-2G2 Figure 98-18S Governor RPM. It will be necessary to de-pin the wires from the P49 connector plug.

3.10.7 Remove idle stop switch (p/n C100E2-39) from the Box Assembly (Bell p/n 204-001-243-001) and install into Co-Pilot Collective Head Assy (p/n D5046-045) per Figure 11 and Dart drawing D212-725-2/-2G2 Figure 98-15S Idle Stop. It will be necessary to de-pin the wires from the P49 connector plug.

3.10.8 Remove longline release and longline arm switches from the Box Assembly (Bell p/n 204-001-243-001) and install into Co-Pilot Collective Head Assy (p/n D5046-045). It will be necessary to cut out appropriately sized holes for the switches. Ensure that they are re-installed per Dart D212-725-2/-

2G2 Figure 98-63S Copilot Collective Stick Wiring. **Approval for switches and related longline system is the responsibility of the installer.**

- 3.10.9 Remove Pin (p/n MS171599) from D5046-045 Co-Pilot Collective Head Assembly. Install D5046-045 Co-Pilot Collective Head Assembly onto Grip Assembly (Bell p/n 212-001-171-001) wet with Proseal 890 or equivalent using Pin (p/n MS171599) per Figure 18. Apply Aircraft Primer to Pin. Secure loose end of D4410-7 Conduit to Grip Assembly using hardware as shown in Figure 4. Hand form D4410-7 Conduit as necessary to secure to Grip Assembly.
- 3.10.10 Route wires down conduit (p/n D4410-7) and connect to plug P49.
- 3.10.11 Attach Face Plate (p/n D5049-1) to Co-Pilot Collective Head Assembly (p/n D5046-045) using hardware as indicated in Figure 1. See Figure 2 for front view of installed switches.
- 3.10.12 Perform a functional check of the electric switches on the co-pilot's collective stick.
- 3.10.13 Attach Placard p/n D4411-7 to instrument panel in clear view of co-pilot.
- 3.10.14 Insert Dart FMS-D212-803 into Rotorcraft Flight Manual.

3.11 Installation of D205-803-121 Left-Hand Pilot in Command Kit (Complete)

- 3.11.1 Modify the aircraft in accordance with Bell S.I. 205-1 Dual Controls. Do not install Switch Box Assembly (Bell p/n 204-001-291-5), Tube (Bell p/n 204-001-293-1), or related hardware.
- 3.11.2 The following instruments must be installed on the co-pilot's side of the aircraft:
- An airspeed indicator;
 - A sensitive altimeter;
 - A non-tumbling gyroscopic bank and pitch indicator;
 - A gyroscopic rate of turn indicator combined with an integral slip-skid indicator
 - A gyroscopic direction indicator
 - A rate-of-climb indicator

These instruments should be installed per Bell SI 205-3 or Bell SI 205-43 based on aircraft serial number.

- 3.11.3 Install the Dart D205-704-013 Co-Pilot's Emergency Cargo Release Kit per FAA STC SR00957NY / TC STC SH93-34 or similar approved emergency cargo release kit.
- 3.11.4 Attach Placard D5055-1/-3 to the D5046-047 Co-Pilot Collective Head Assy. See Figure 10 for location.
- 3.11.5 Install engine start switch (p/n 2PB744-T2) into Co-Pilot Collective Head Assembly (p/n D5046-047) per Figure 11; BHT-205A1-MM-1 Chapter 98, Figure 15, Starter Generator and Bus Wiring Diagram; and Dart drawing D205-803-901.
- 3.11.6 Install Trigger (p/n D4410-9) using Pin (p/n MS20253-1-065) into Co-Pilot Collective Head Assembly (p/n D5046-047). Install Setscrew (p/n AN565F8H9) and Nut (p/n MS21042L08) into Trigger as shown in Figure 11. Ensure that the Trigger can move freely; it may be necessary to file a small amount of material off the mounting lugs on the Co-Pilot Collective Head Assembly. Tighten the Setscrew so that the Trigger sits flush against the engine start switch button (p/n 2PB744-T2). Ensure that activating the Trigger will depress the engine start switch button and that the engine start switch button can fully extend when the Trigger is released.

- 3.11.7 Remove engine governor RPM switch (p/n 13AT66) from the Switch Box Assembly (Bell p/n 205-001-124-1) and install into the Co-Pilot Collective Head (p/n D5046-7) per Figure 11; BHT-205A1-MM-1 Chapter 98, Figure 18, Governor RPM (N2) Wiring diagram; and Dart drawing D205-803-901. It will be necessary to de-pin the wires from the P107 connector plug.
- 3.11.8 Install idle stop switch (p/n C100E2-39) into the Co-Pilot Collective Head (p/n D5046-7) per Figure 11 and Dart drawing D205-803-901.
- 3.11.9 Space has been provided for the customer to install optional longline release switches on the Co-Pilot Collective Head Assy (p/n D5046-047). The switches and related longline system must be installed per the manufacturer's approved installation instructions. **Approval for switches and related longline system is the responsibility of the installer.**
- 3.11.10 Install D5046-047 Co-Pilot Collective Head Assembly onto Stick Assembly (Bell p/n 204-001-612-1) per Figure 19. Torque nut per Table 1.
- 3.11.11 Secure loose end of D5054-1 Conduit to Stick Assembly by transfer drilling 7/64" and deburring two holes from the mounting brackets on the 204-001-612-1 Stick Assembly through the D5054-1 Conduit. Do not route wires through the D5054-1 Conduit until after transfer drilling. Attach the D5054-1 Conduit using hardware as shown in Figure 20. Hand form D5054-1 Conduit as necessary to secure to Stick Assembly.
- 3.11.12 Route new wires with existing wires down conduit (p/n D5054-1) and terminate at plug LHPIC-P1.
- 3.11.13 De-pin socket J107 and connect to LHPIC-J1 in accordance with Dart drawing D205-803-901.
- 3.11.14 Mount bulkhead socket LHPIC-J1 to web at station 52 where socket J107 was previously mounted. Connect plug LHPIC-P1 to socket LHPIC-J1.
- 3.11.15 Attach Face Plate (p/n D5049-1) to Co-Pilot Collective Head Assembly (p/n D5046-047) using hardware as indicated in Figure 11. See Figure 10 for front view of installed switches.
- 3.11.16 Perform a functional check of the electric switches on the co-pilot's collective stick.
- 3.11.17 Attach Placard p/n D4411-7 to instrument panel in clear view of co-pilot.
- 3.11.18 Insert FMS-D212-803 into Rotorcraft Flight Manual.

3.12 **Installation of D205-803-123 Left-Hand Pilot in Command Kit (Mechanical Only)**

- 3.12.1 This kit is identical to the D205-803-121 kit except that the switches, connectors and other electrical components are not included. It is the installer's responsibility to acquire the following components:

Qty	Part Number	Description
1	2PB744-T2	SWITCH
1	C100E2-39	SWITCH
14	M39029/31-240	PIN
14	M39029/32-259	SOCKET
1	MS3126E14-19P	PLUG
1	MS3120E14-19S	SOCKET

- 3.12.2 Follow the steps provided in Section 3.11.

3.13 Installation of D205-803-211 Left-Hand Pilot in Command Kit (Complete)

3.13.1 Modify the aircraft in accordance with Bell S.I. 205-1 Dual Controls. Do not install Switch Box Assembly (Bell p/n 205-001-124-1), Conduit (Bell p/n 205-001-120-1), or related hardware.

3.13.2 The following instruments must be installed on the co-pilot's side of the aircraft:

- An airspeed indicator;
- A sensitive altimeter;
- A non-tumbling gyroscopic bank and pitch indicator;
- A gyroscopic rate of turn indicator combined with an integral slip-skid indicator;
- A gyroscopic direction indicator;
- A rate-of-climb indicator

These instruments should be installed per Bell SI 205-3 or Bell SI 205-43 based on aircraft serial number.

3.13.3 Install the Dart D205-704-013 Co-Pilot's Emergency Cargo Release Kit per FAA STC SR00957NY / TC STC SH93-34 or similar approved emergency cargo release kit.

3.13.4 Attach D5055-1/-3 Placards to D5156-3 Face Plate. See Figure 22 for location.

NOTE: It is acceptable to install the D5156-1 Face Plate in place of the D5156-3 Face Plate so the operator may locate the switches per their requirements. The D5055-1/-3 Placards must be installed on the D5156-1 Face Plate with the corresponding switches per Figure 21.

3.13.5 Install engine start switch (p/n 2PB744-T2) into Co-Pilot Collective Head Assembly (p/n D5155-041) per Figure 21; BHT-205A1-MM-1 Chapter 98, Figure 15, Starter Generator and Bus Wiring Diagram; and Dart drawing D205-803-901.

3.13.6 Install Trigger (p/n D4410-9) using Pin (p/n MS20253-1-065) into Co-Pilot Collective Head Assembly (p/n D5155-041). Install Setscrew (p/n AN565F8H9) and Nut (p/n MS21042L08) into Trigger as shown in Figure 21. Ensure that the Trigger can move freely; it may be necessary to file a small amount of material off the mounting lugs on the Co-Pilot Collective Head Assembly. Tighten the Setscrew so that the Trigger sits flush against the engine start switch button (p/n 2PB744-T2). Ensure that activating the Trigger will depress the engine start switch button and that the engine start switch button can fully extend when the Trigger is released.

3.13.7 It is acceptable to remove the D5156-9 Back Plate to aid with steps 3.13.8-3.13.10 per Figure 21.

3.13.8 Remove engine governor RPM switch (p/n 13AT66) from the Switch Box Assembly (Bell p/n 205-001-124-1) and install into Face Plate (p/n D5156-1/-3) per Figure 21; BHT-205A1-MM-1 Chapter 98, Figure 18, Governor RPM (N2) Wiring diagram; and Dart drawing D205-803-901. It will be necessary to de-pin the wires from the P107 connector plug.

3.13.9 Install idle stop switch (p/n C100E2-39) into the Co-Pilot Collective Head Assy (p/n D5155-041) per Figure 21 and Dart drawing D205-803-901.

3.13.10 Space has been provided for the customer to install optional longline release switches on the Co-Pilot Collective Head Assy (p/n D5155-041). The switches and related longline system must be installed per the manufacturer's approved installation instructions. **Approval for switches and related longline system is the responsibility of the installer.**

- 3.13.11 To install D5155-041 Co-Pilot Collective Head Assembly onto Stick Assembly (Bell p/n 205-001-117-1), transfer drill the mounting hole on the Stick Assembly to the desired location on the neck of the D5155-041 Collective Head. To adjust the position of the D5155-041 Collective Head, it is acceptable to remove ½" to ¾" off of the neck as desired. Wet with Proseal 890 or equivalent and mount using Pin (p/n MS171539) per Figure 23. Apply Aircraft Primer to Pin. Secure loose end of D4410-7 Conduit to Stick Assembly using hardware as shown in Figure 4. Hand form D4410-7 Conduit as necessary to secure to Stick Assembly.
- 3.13.12 Route new wires with existing wires down conduit (p/n D4410-7) and terminate at plug LHPIC-P1.
- 3.13.13 De-pin socket J107 and connect to LHPIC-J1 in accordance with Dart drawing D205-803-901.
- 3.13.14 Mount bulkhead socket LHPIC-J1 to web at station 52 where socket J107 was previously mounted. Connect plug LHPIC-P1 to socket LHPIC-J1.
- 3.13.15 Attach Face Plate (p/n D5156-1/-3) to Co-Pilot Collective Head Assembly (p/n D5155-041) using hardware as indicated in Figure 21. See Figure 22 for front view of installed switches.
- 3.13.16 If applicable, reinstall the D5156-9 Back Plate per Figure 21.
- 3.13.17 Perform a functional check of the electric switches on the co-pilot's collective stick.
- 3.13.18 Attach Placard p/n D4411-7 to instrument panel in clear view of co-pilot.
- 3.13.19 Insert FMS-D212-803 into Rotorcraft Flight Manual.

3.14 **Installation of D205-803-213 Left-Hand Pilot in Command Kit (Mechanical Only)**

- 3.14.1 This kit is identical to the D205-803-211 kit except that the switches, connectors and other electrical components are not included. It is the installer's responsibility to acquire the following components:

Qty	Part Number	Description
1	2PB744-T2	SWITCH
1	C100E2-39	SWITCH
14	M39029/31-240	PIN
14	M39029/32-259	SOCKET
1	MS3126E14-19P	PLUG
1	MS3120E14-19S	SOCKET

- 3.14.2 Follow the steps provided in Section 3.13.

3.15 **Installation of D212-803-215 Left-Hand Pilot in Command Kit (Complete)**

- 3.15.1 If installing on a Bell 212, modify the aircraft in accordance with Bell S.I. 212-4 Dual Controls (S/N 30504 thru 35068) or Bell S.I. 212-89 Dual Controls (S/N 35069 and subsequent). Do not install Box (Bell p/n 212-001-148-3), Conduit (Bell p/n 212-001-169-1), or related hardware.
- 3.15.2 If installing on a Bell 412, modify the aircraft in accordance with Bell S.I. 412-SI-13 Dual Controls. Do not install Box (Bell p/n 212-001-148-003), Conduit (Bell p/n 212-001-169-001), or related hardware.
- 3.15.3 The following instruments must be installed on the co-pilot's side of the aircraft:
- An airspeed indicator;
 - A sensitive altimeter;
 - A non-tumbling gyroscopic bank and pitch indicator;

- A gyroscopic rate of turn indicator combined with an integral slip skid indicator;
- A gyroscopic direction indicator;
- A rate-of-climb indicator

These instruments should be installed per Bell SI 212-1 or Bell SI 212-41 based on aircraft serial number or Bell SI 412-10.

3.15.4 Install the Dart D412-704-011 Co-Pilot's Emergency Cargo Release Kit per FAA STC SR00957NY / TC STC SH93-34 or similar approved emergency cargo release kit.

3.15.5 Attach Placard p/n D5055-5/-7 to the Face Plate (p/n D5156-7) per Figures 25 and 26. If the aircraft **has not** been modified in accordance with Bell Technical Bulletin TB 212-91-138 (212) or TB 412-93-118 (412), then attach Placard p/n D5055-3 to Face Plate (p/n D5156-7) per Figure 26. If the aircraft **has been** modified in accordance with Bell Technical Bulletin TB 212-98-138 (212), or TB 412-93-118 (412) or is a Bell 412 S/N 36020 to 36086 and subsequent or is modified for improved hover performance with PT6T-3BE engines and 5 minute takeoff power rating (412-570-001-103), then attach Placard p/n D5055-9 to Face Plate (p/n D5156-7) per Figure 25.

NOTE: It is acceptable to install the D5156-5 Face Plate in place of the D5156-7 Face Plate so the operator may locate the switches per their requirements. The D5055-5/-7 and D5055-3 or D5055-9 Placards must be installed on the D5156-5 Face Plate with the corresponding switches per Figure 24.

3.15.6 It is acceptable to remove the D5156-11 Back Plate to aid with steps 3.15.6-3.15.10 per Figure 24.

3.15.7 Install engine start switch (p/n 27ET51-T) into Face Plate (p/n D5156-5/-7) per Figure 24; and Dart drawing D212-803-903 for the 212 and D412-803-905 for the 412. Install Diode Assemblies (p/n 30-037-26, qty. 3 & p/n 30-037-3, qty. 2) into Terminal Board (MS27212-1-3) using Strip (MS3373-A1), Washer (AN961-6T) and Nut (MS21042L06) as required.

3.15.8 If installing on a 212 and if the aircraft has not been modified in accordance with Bell Technical Bulletin TB 212-91-138, then remove the engine governor RPM switch (p/n 13AT66) from the Box (Bell p/n 212-001-148-3) and install into Face Plate (p/n D5156-5/-7) per Figure 24; BHT-212-MM Chapter 98, Figure 18, Governor RPM Wiring diagram; and Dart drawing D212-803-903. It will be necessary to de-pin the wires from the P49 connector plug.

3.15.9 If installing on a 412 and if the aircraft has not been modified in accordance with Bell Technical Bulletin TB 412-93-118, then remove the engine governor RPM switch (p/n 13AT66) from the Box (Bell p/n 212-001-148-3) and install into Face Plate (p/n D5156-5/-7) per Figure 24; BHT-412-MM Chapter 98, Figure 29 for S/N 33001 through 33100, Figure 30 for S/N 33101 through 33107 or Figure 31 for S/N 33108 through 33213 and 36001 through 36019, Governor RPM Wiring diagram; and Dart drawing D412-803-905. It will be necessary to de-pin the wires from the P49 connector plug.

3.15.10 If installing on a 212 and if the aircraft has been modified in accordance with Bell Technical Bulletin TB 212-91-138, then install engine governor RPM switch (p/n 51MX5-5-J) into Face Plate (p/n D5156-5/-7) per Figure 24; and Dart drawing D212-803-903.

3.15.11 If installing on a 412 and if the aircraft has been modified in accordance with Bell Technical Bulletin TB 412-93-118, or is S/N 36020 to 36086 and subsequent or is modified for improved hover performance with PT6T-3BE Engines and 5 minute takeoff power rating (412-570-001-103) then install engine governor RPM switch (p/n 51MX5-5-J) into Face Plate (p/n D5156-5/-7) per Figure 24; and Dart drawing D412-803-905.

- 3.15.12 Install idle stop switch into Co-Pilot Collective Head Assy (p/n D5155-043) per Figure 24 and Dart dwg D212-803-903 for a 212 and D412-803-905 for a 412.
- 3.15.13 Space has been provided for the customer to install optional longline release switches on the Co-Pilot Collective Head Assy (p/n D5155-043). The switches and related longline system must be installed per the manufacturer's approved installation instructions. **Approval for switches and related longline system is the responsibility of the installer.**
- 3.15.14 To install D5155-043 Co-Pilot Collective Head Assembly onto Stick Assembly (Bell p/n 212-001-117-1) transfer drill the mounting hole on the Stick Assembly to the desired location on the neck of the Collective Head. To adjust the position of the -043 Collective Head, it is acceptable to remove $\frac{1}{2}$ " to $\frac{3}{4}$ " of the neck as desired. Wet with Proseal 890 or equivalent using Pin (p/n MS171599) per Figure 27. Apply Aircraft Primer to Pin. Secure loose end of D4410-7 Conduit to Stick Assembly using hardware as shown in Figure 4. Hand form D4410-7 Conduit as necessary to secure to Stick Assembly.
- 3.15.15 Route new wires with existing wires down conduit (p/n D4410-7) and terminate at plug LHPIC-P1.
- 3.15.16 De-pin socket J49 and connect to LHPICJ1 in accordance with Dart drawing D212-803-903.
- 3.15.17 Mount bulkhead socket LHPIC-J1 to web at station 52 where socket J49 was previously mounted. Connect plug LHPIC-P1 to socket LHPIC-J1.
- 3.15.18 Attach Face Plate (p/n D5156-5/-7) to Co-Pilot Collective Head Assembly (p/n D5155-043) using hardware as indicated in Figure 24. See Figures 25 and 26 for front view of installed switches.
- 3.15.19 If applicable, reinstall the D5156-11 Back Plate per Figure 24.
- 3.15.20 Perform a functional check of the electric switches on the co-pilot's collective stick.
- 3.15.21 Attach Placard p/n D4411-7 to instrument panel in clear view of co-pilot.
- 3.15.22 Insert FMS-D212-803 into Rotorcraft Flight Manual.

3.16 Installation of D212-803-217 Left-Hand Pilot in Command Kit (Mechanical Only)

- 3.16.1 This kit is identical to the D212-803-215 kit except that the switches, connectors and other electrical components are not included. It is the installer's responsibility to acquire the following components:

Qty	Part Number	Description
1	27ET51-T	SWITCH (ALT P/N 212-075-153-3)
3	30-037-26	DIODE ASSEMBLY
2	30-037-3	DIODE ASSEMBLY
3	AN961-6T	WASHER
1	51MXY-5-J	SWITCH
AR (21)	M39029/31-240	PIN
AR (21)	M39029/32-259	SOCKET
AR (2)	M39029/31-228	PIN
AR (2)	M39029/32-247	SOCKET
3	MS21042L06	NUT
1	MS24523-27	SWITCH
1	MS27212-1-3	TERMINAL BOARD
2	MS3126E16-99P	PLUG
1	MS3120E16-99S	SOCKET
3	MS3373-A1	STRIP

- 3.16.2 Follow the steps provided in Section 3.15.

3.17 Installation of D212-803-219 Left-Hand Pilot in Command Kit
(Bell 212 modified per FAA STC SR02831NY / TC STC SH07-28)

- 3.17.1 Modify the aircraft in accordance with Dart Service Bulletin DSB-D212-725-2 Co-pilot Instruments.
- 3.17.2 Install the Dart D412-704-011 Co-Pilot's Emergency Cargo Release Kit per FAA STC SR00957NY / TC STC SH93-34 or similar approved emergency cargo release kit.
- 3.17.3 Attach D5055-1/-3 Placard to the D5156-3 Face Plate. See Figure 22 for location.

NOTE: It is acceptable to install the D5156-1 Face Plate in place of the D5156-3 Face Plate so the operator may locate the switches per their requirements. The D5055-1/-3 Placards must be installed on the D5156-1 Face Plate with the corresponding switches per Figure 21.

- 3.17.4 Remove engine start switch (p/n 2PB744-T2) from Box Assembly (Bell p/n 204-001-243-001) and install into Co-Pilot Collective Head Assembly (p/n D5155-045) per Figure 21 and Dart drawing D212-725-2/-2G2 Figure 98-14S Engine Start. It will be necessary to de-pin the wires from the P49 connector plug.
- 3.17.5 Install Trigger (p/n D4410-9) using Pin (p/n MS20253-1-065) into Co-Pilot Collective Head Assembly (p/n D5155-045). Install Setscrew (p/n AN565F8H9) and Nut (p/n MS21042L08) into Trigger as shown in Figure 21. Ensure that the Trigger can move freely; it may be necessary to file a small amount of material off the mounting lugs on the Co-Pilot Collective Head Assembly. Tighten the Setscrew so that the Trigger sits flush against the engine start switch button (p/n 2PB744-T2). Ensure that activating the Trigger will depress the engine start switch button and that the engine start switch button can fully extend when the Trigger is released.
- 3.17.6 It is acceptable to remove the D5156-9 Back Plate to aid with steps 3.17.7-3.17.9 per Figure 21.
- 3.17.7 Remove engine governor RPM switch (p/n 13AT66) from the Box Assembly (Bell p/n 204-001-243-001) and install into Face Plate (p/n D5156-1/-3) per Figure 21 and Dart drawing D212-725-2/-2G2 Figure 98-18S Governor RPM. It will be necessary to de-pin the wires from the P49 connector plug.
- 3.17.8 Remove idle stop switch (p/n C100E2-39) from the Box Assembly (Bell p/n 204-001-243-001) and install into Face Plate (p/n D5156-1/-3) per Figure 21 and Dart drawing D212-725-2/-2G2 Figure 98-15S Idle Stop. It will be necessary to de-pin the wires from the P49 connector plug.
- 3.17.9 Remove longline release and longline arm switches from the Box Assembly (Bell p/n 204-001-243-001) and install into Co-Pilot Collective Head Assy (p/n D5155-045). It will be necessary to cut out appropriately sized holes for the switches. Ensure that they are re-installed per Dart D212-725-2/-2G2 Figure 98-63S Copilot Collective Stick Wiring. **Approval for switches and related longline system is the responsibility of the installer.**
- 3.17.10 To install D5155-045 Co-Pilot Collective Head Assembly onto Grip Assembly (Bell p/n 212-001-171-001), transfer drill the mounting hole on the Grip Assembly to the desired location on the neck of the Collective Head. To adjust the position of the -045 Collective Head, it is acceptable to remove $\frac{1}{2}$ " to $\frac{3}{4}$ " of the neck as desired. Wet with Proseal 890 or equivalent using Pin (p/n MS171599) per Figure 28. Apply Aircraft Primer to Pin. Secure loose end of D4410-7 Conduit to Grip Assembly using hardware as shown in Figure 4. Hand form D4410-7 Conduit as necessary to secure to Grip Assembly.
- 3.17.11 Route wires down conduit (p/n D4410-7) and connect to plug P49.

3.17.12 Attach Face Plate (p/n D5156-1/-3) to Co-Pilot Collective Head Assembly (p/n D5155-045) using hardware as indicated in Figure 21. See Figure 22 for front view of installed switches.

3.17.13 If applicable, reinstall the D5156-9 Back Plate per Figure 21.

3.17.14 Perform a functional check of the electric switches on the co-pilot's collective stick.

3.17.15 Attach Placard p/n D4411-7 to instrument panel in clear view of co-pilot.

3.17.16 Insert Dart FMS-D212-803 into Rotorcraft Flight Manual.

3.18 Installation of D205-803-221 Left-Hand Pilot in Command Kit (Complete)

3.18.1 Modify the aircraft in accordance with Bell S.I. 205-1 Dual Controls. Do not install Switch Box Assembly (Bell p/n 204-001-291-5), Tube (Bell p/n 204-001-293-1), or related hardware.

3.18.2 The following instruments must be installed on the co-pilot's side of the aircraft:

- An airspeed indicator;
- A sensitive altimeter;
- A non-tumbling gyroscopic bank and pitch indicator;
- A gyroscopic rate of turn indicator combined with an integral slip-skid indicator
- A gyroscopic direction indicator
- A rate-of-climb indicator

These instruments should be installed per Bell SI 205-3 or Bell SI 205-43 based on aircraft serial number.

3.18.3 Install the Dart D205-704-013 Co-Pilot's Emergency Cargo Release Kit per FAA STC SR00957NY / TC STC SH93-34 or similar approved emergency cargo release kit.

3.18.4 Attach D5055-1/-3 Placard to the D5156-3 Face Plate. See Figure 22 for location.

NOTE: It is acceptable to install the D5156-1 Face Plate in place of the D5156-3 Face Plate so the operator may locate the switches per their requirements. The D5055-1/-3 Placards must be installed on the D5156-1 Face Plate with the corresponding switches per Figure 21.

3.18.5 Install engine start switch (p/n 2PB744-T2) into Co-Pilot Collective Head Assembly (p/n D5155-047) per Figure 21; BHT-205A1-MM-1 Chapter 98, Figure 15, Starter Generator and Bus Wiring Diagram; and Dart drawing D205-803-901.

3.18.6 Install Trigger (p/n D4410-9) using Pin (p/n MS20253-1-065) into Co-Pilot Collective Head Assembly (p/n D5155-047). Install Setscrew (p/n AN565F8H9) and Nut (p/n MS21042L08) into Trigger as shown in Figure 21. Ensure that the Trigger can move freely; it may be necessary to file a small amount of material off the mounting lugs on the Co-Pilot Collective Head Assembly. Tighten the Setscrew so that the Trigger sits flush against the engine start switch button (p/n 2PB744-T2). Ensure that activating the Trigger will depress the engine start switch button and that the engine start switch button can fully extend when the Trigger is released.

3.18.7 It is acceptable to remove the D5156-9 Back Plate to aid with steps 3.18.8-3.18.10 per Figure 21.

3.18.8 Remove engine governor RPM switch (p/n 13AT66) from the Switch Box Assembly (Bell p/n 205-001-124-1) and install into the Face Plate (p/n D5156-1/-3) per Figure 21; BHT-205A1-MM-1

Chapter 98, Figure 18, Governor RPM (N2) Wiring diagram; and Dart drawing D205-803-901. It will be necessary to de-pin the wires from the P107 connector plug.

- 3.18.9 Install idle stop switch (p/n C100E2-39) into the Face Plate (p/n D5156-1/-3) per Figure 21 and Dart drawing D205-803-901.
- 3.18.10 Space has been provided for the customer to install optional longline release switches on the Co-Pilot Collective Head Assy (p/n D5155-047). The switches and related longline system must be installed per the manufacturer's approved installation instructions. **Approval for switches and related longline system is the responsibility of the installer.**
- 3.18.11 Install D5155-047 Co-Pilot Collective Head Assembly onto Stick Assembly (Bell p/n 204-001-612-1) per Figure 29. Torque nut per Table 1.
- 3.18.12 Secure loose end of D5054-1 Conduit to Stick Assembly by transfer drilling 7/64" and deburring two holes from the mounting brackets on the 204-001-612-1 Stick Assembly through the D5054-1 Conduit. Do not route wires through the D5054-1 Conduit until after transfer drilling. Attach the D5054-1 Conduit using hardware as shown in Figure 30. Hand form D5054-1 Conduit as necessary to secure to Stick Assembly.
- 3.18.13 Route new wires with existing wires down conduit (p/n D5054-1) and terminate at plug LHPIC-P1.
- 3.18.14 De-pin socket J107 and connect to LHPIC-J1 in accordance with Dart drawing D205-803-901.
- 3.18.15 Mount bulkhead socket LHPIC-J1 to web at station 52 where socket J107 was previously mounted. Connect plug LHPIC-P1 to socket LHPIC-J1.
- 3.18.16 Attach Face Plate (p/n D5156-1/-3) to Co-Pilot Collective Head Assembly (p/n D5155-047) using hardware as indicated in Figure 21. See Figure 22 for front view of installed switches.
- 3.18.17 If applicable, reinstall the D5156-9 Back Plate per Figure 21.
- 3.18.18 Perform a functional check of the electric switches on the co-pilot's collective stick.
- 3.18.19 Attach Placard p/n D4411-7 to instrument panel in clear view of co-pilot.
- 3.18.20 Insert FMS-D212-803 into Rotorcraft Flight Manual.

3.19 **Installation of D205-803-223 Left-Hand Pilot in Command Kit (Mechanical Only)**

- 3.19.1 This kit is identical to the D205-803-221 kit except that the switches, connectors and other electrical components are not included. It is the installer's responsibility to acquire the following components:

Qty	Part Number	Description
1	2PB744-T2	SWITCH
1	C100E2-39	SWITCH
14	M39029/31-240	PIN
14	M39029/32-259	SOCKET
1	MS3126E14-19P	PLUG
1	MS3120E14-19S	SOCKET

- 3.19.2 Follow the steps provided in Section 3.18.

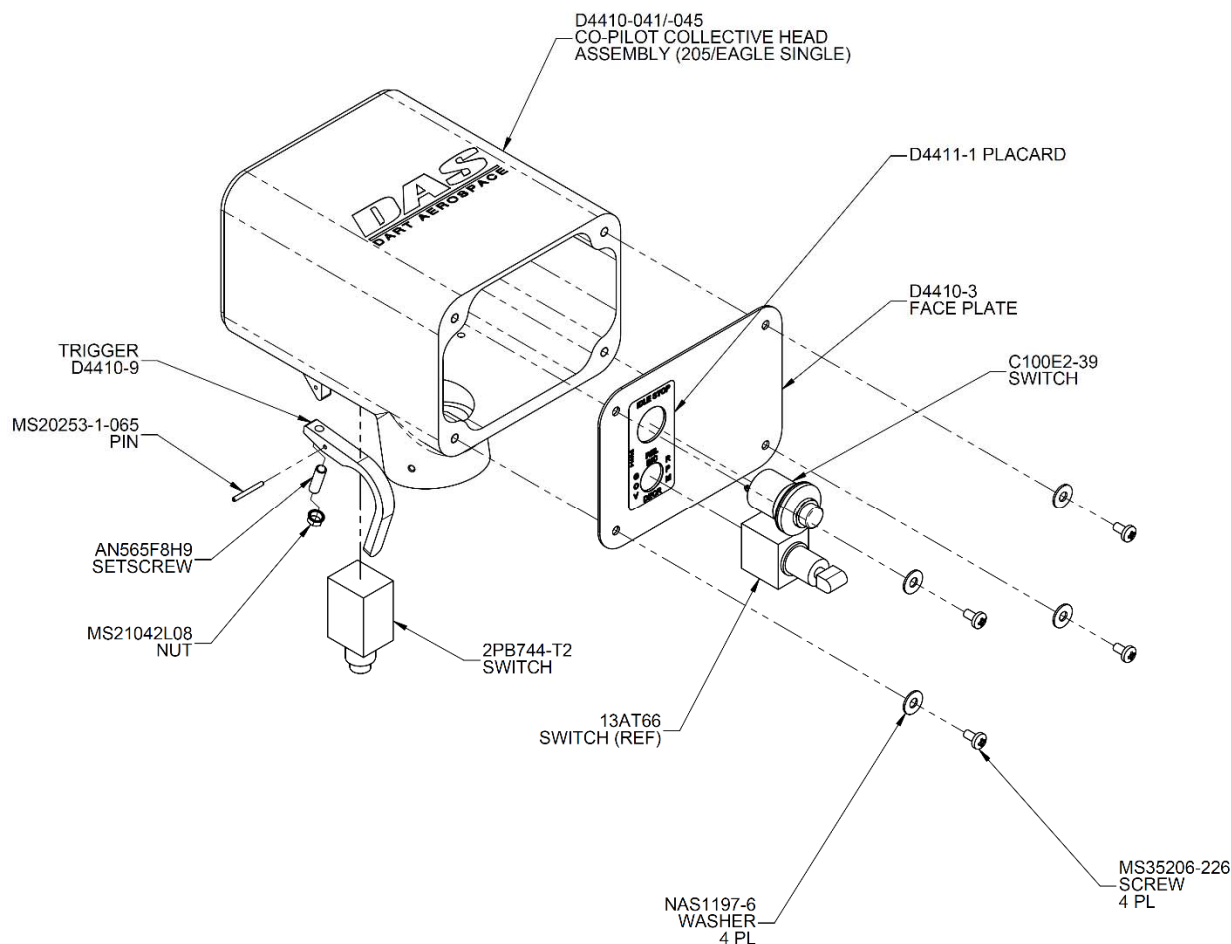


FIGURE 1: DXXX-803-011/-019 Kit Switches Installation
(Wiring Conduit Tube Removed for Clarity)

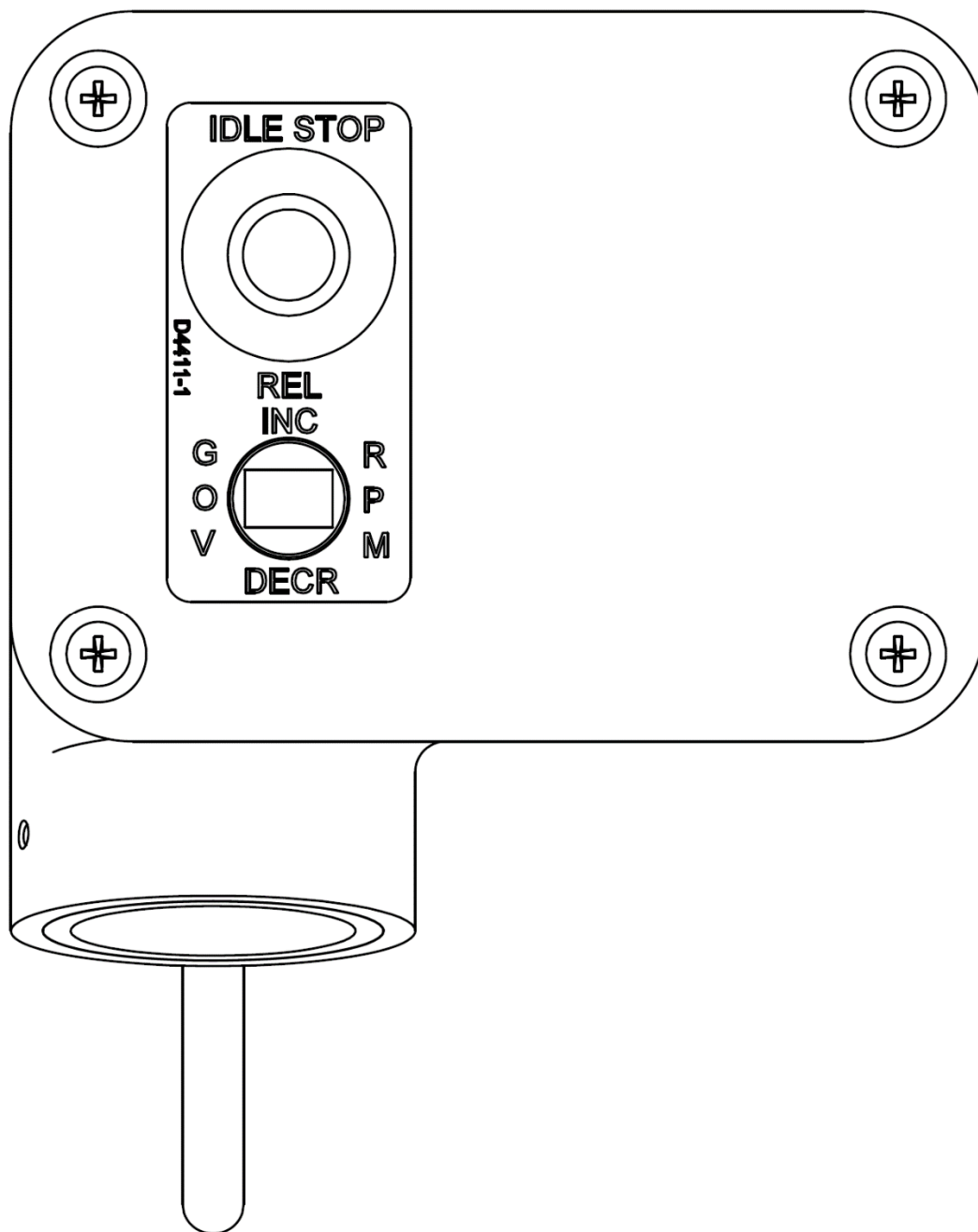


FIGURE 2: DXXX-803-011/-013/-019 Co-Pilot Collective Head Front View

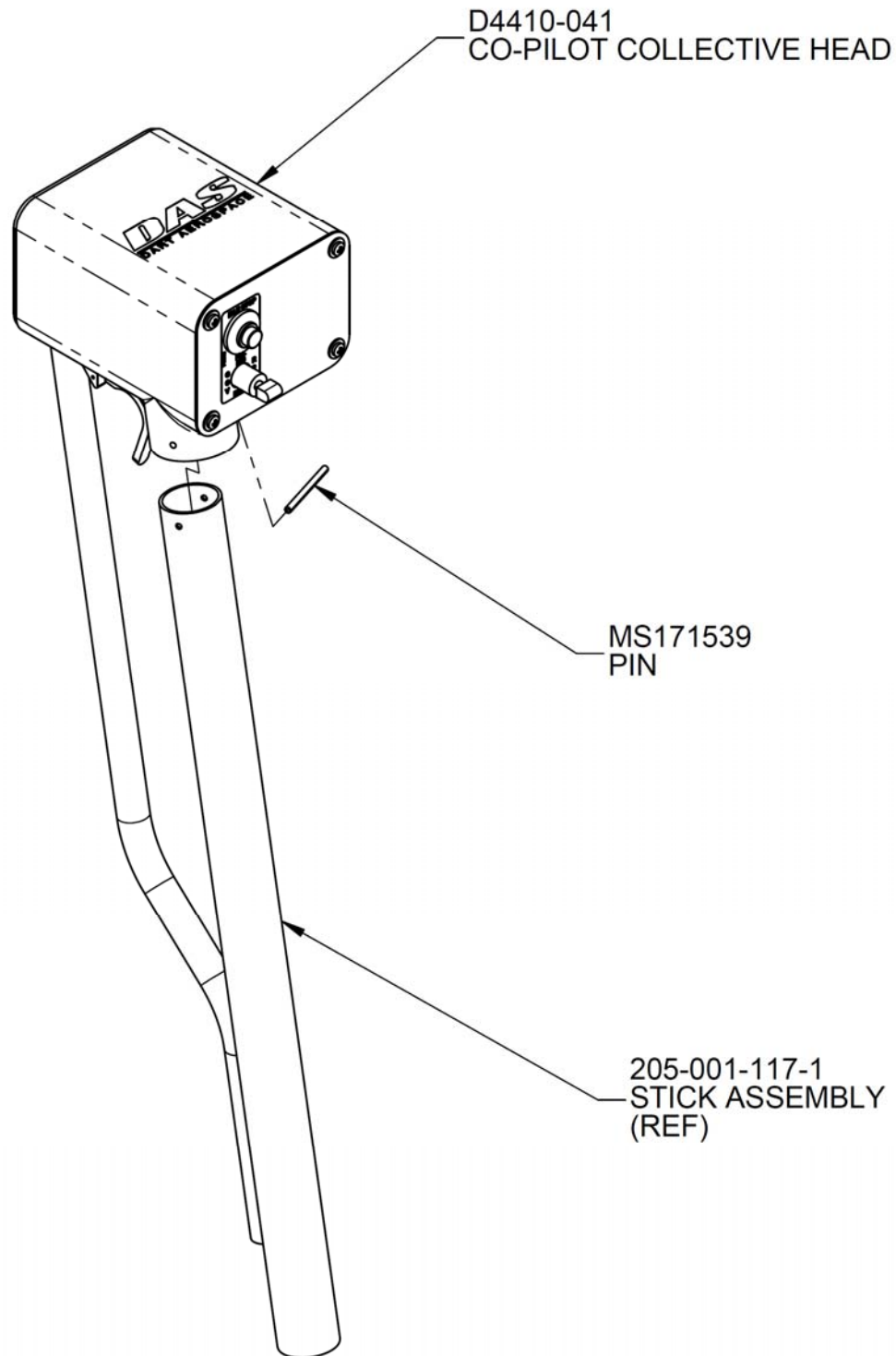


FIGURE 3: D205-803-011/-013 Co-Pilot Collective Head Installation

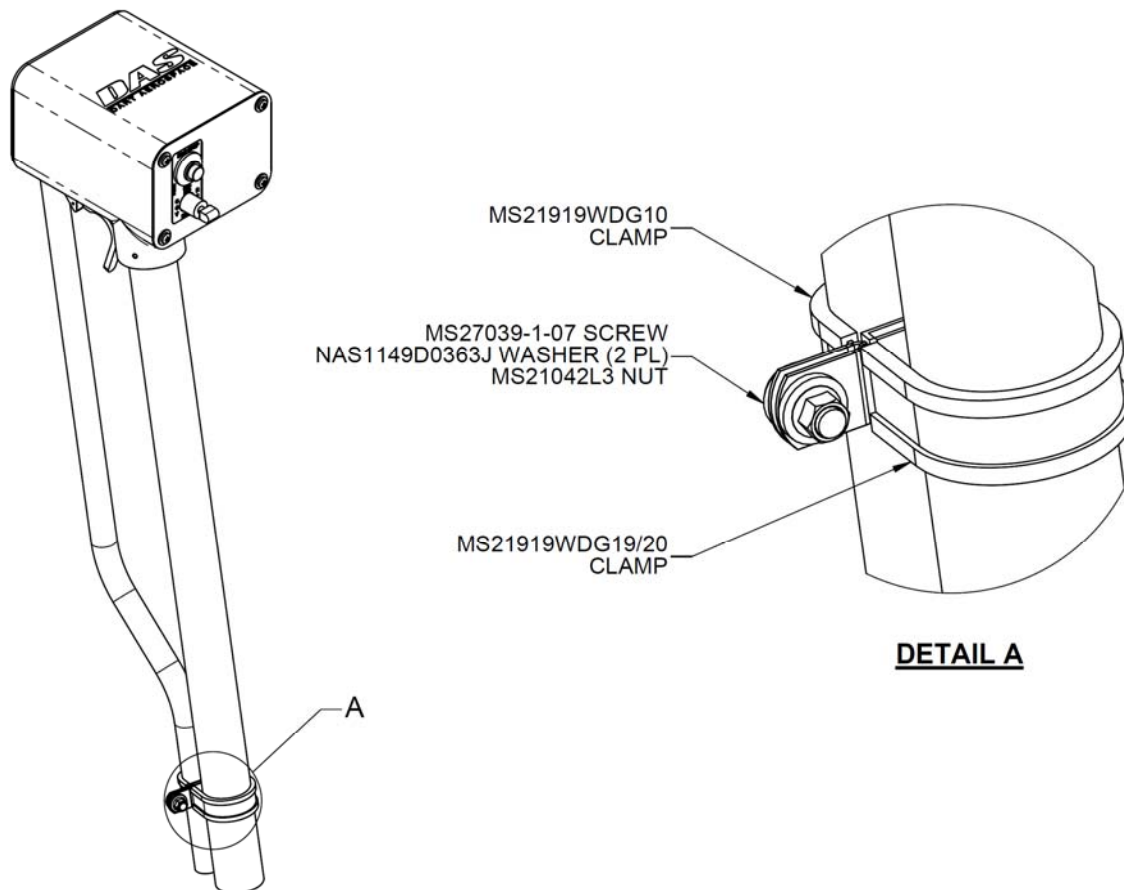


FIGURE 4: DXXX-803-XXX Wiring Conduit Clamp Detail
(-011 Shown, -013/-015/-017/-019/
-111/-113/-115/-117/-119/-121/-123/
-211/-213/-215/-217/-219/-221/-223 Similar)

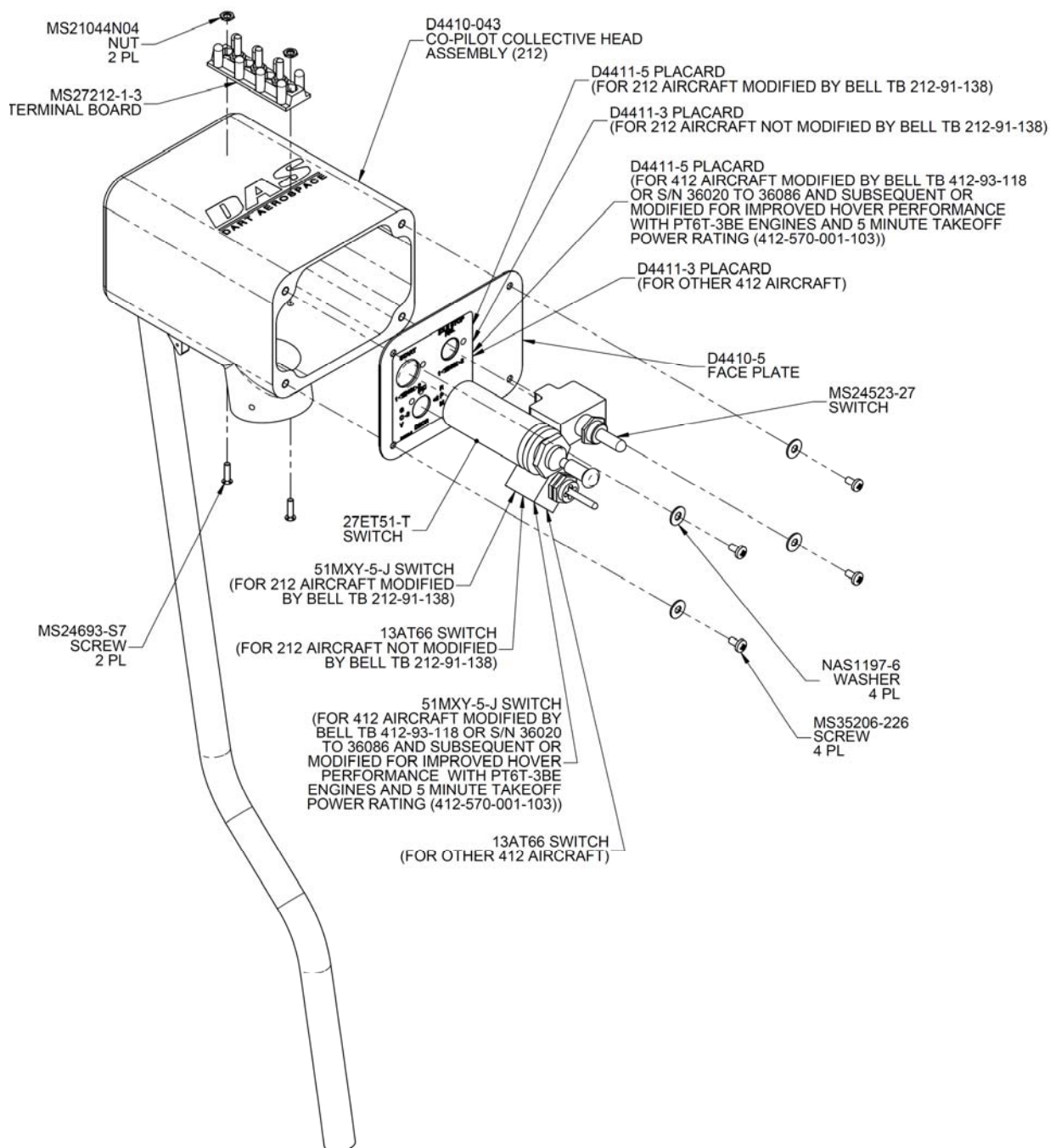


FIGURE 5: D212-803-015 Kit Switches Installation

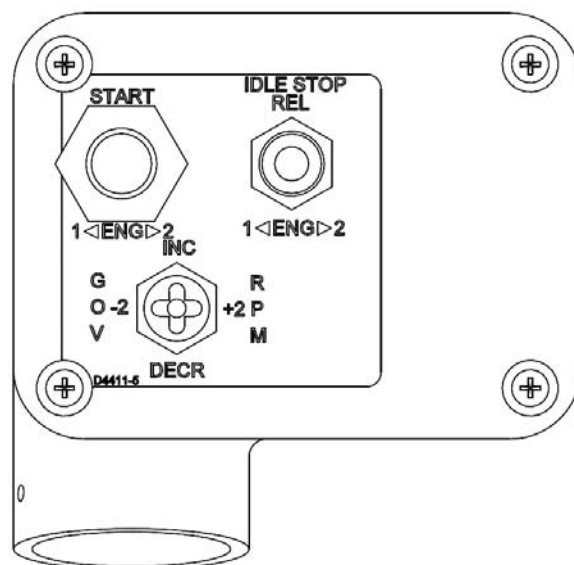


FIGURE 6: D212-803-015/-017 Co-Pilot Collective Head Front View
(aircraft modified by Bell TB 212-91-138 (212) or TB 412-93-118 (412) or is a Bell 412 S/N 36020 to 36086 and subsequent or is modified for improved hover performance with PT6T-3BE engines and 5 minute takeoff power rating (412-570-001-103))

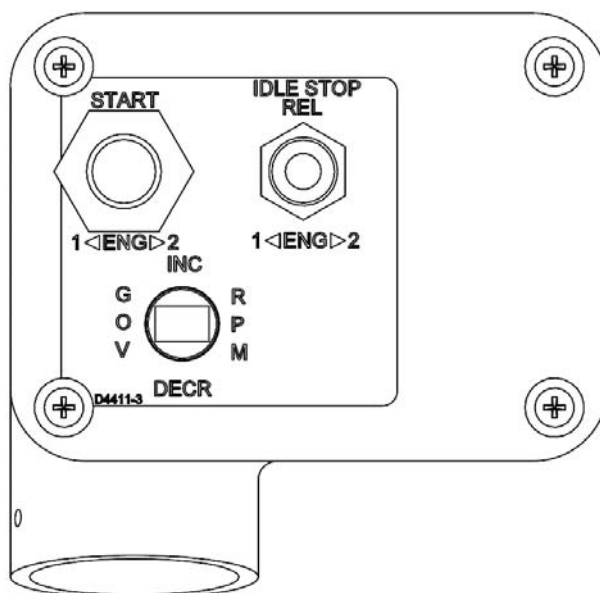


FIGURE 7: D212-803-015/-017 Co-Pilot Collective Head Front View
(for other 212/412 aircraft)

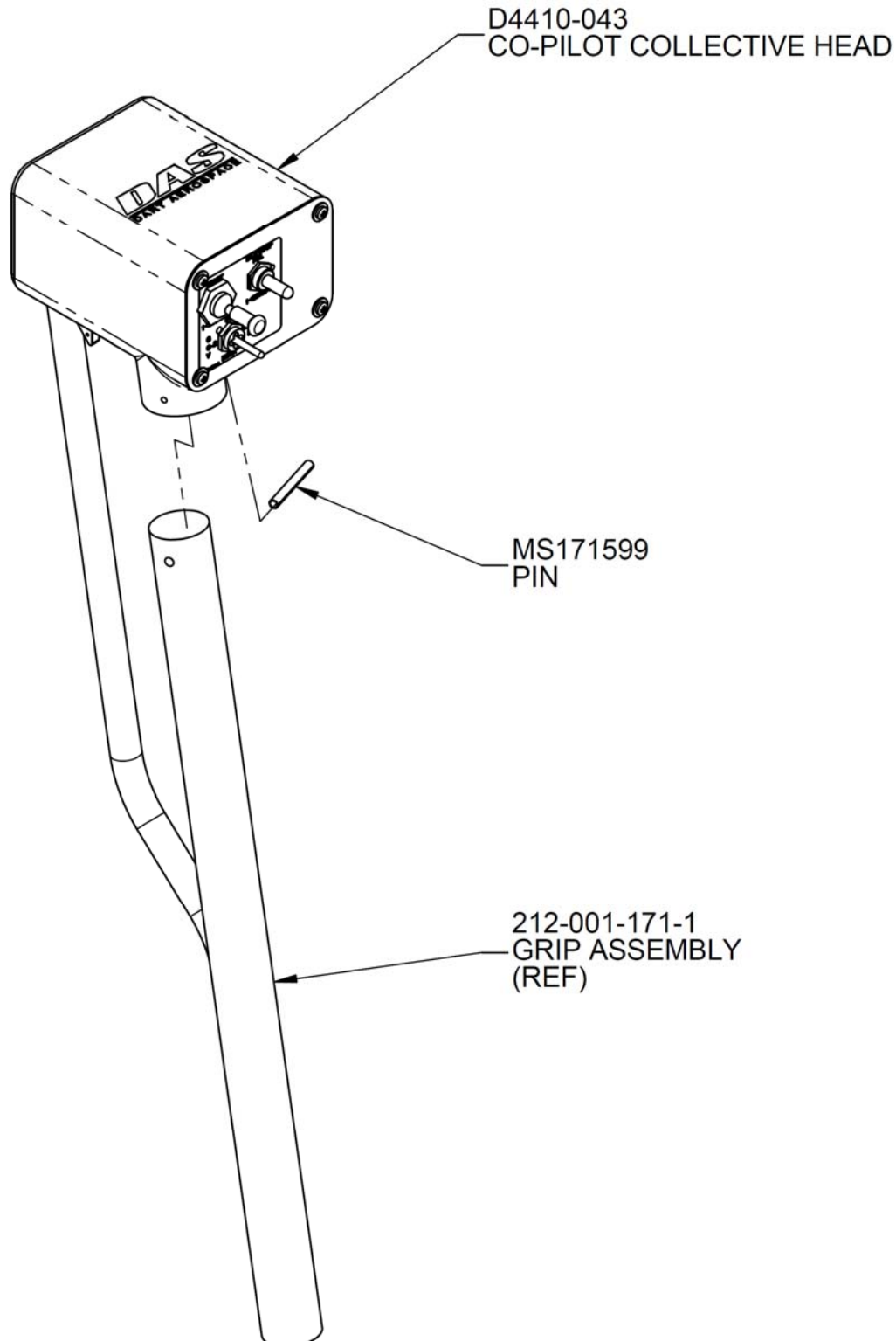


FIGURE 8: D212-803-015/-017 Co-Pilot Collective Head Installation

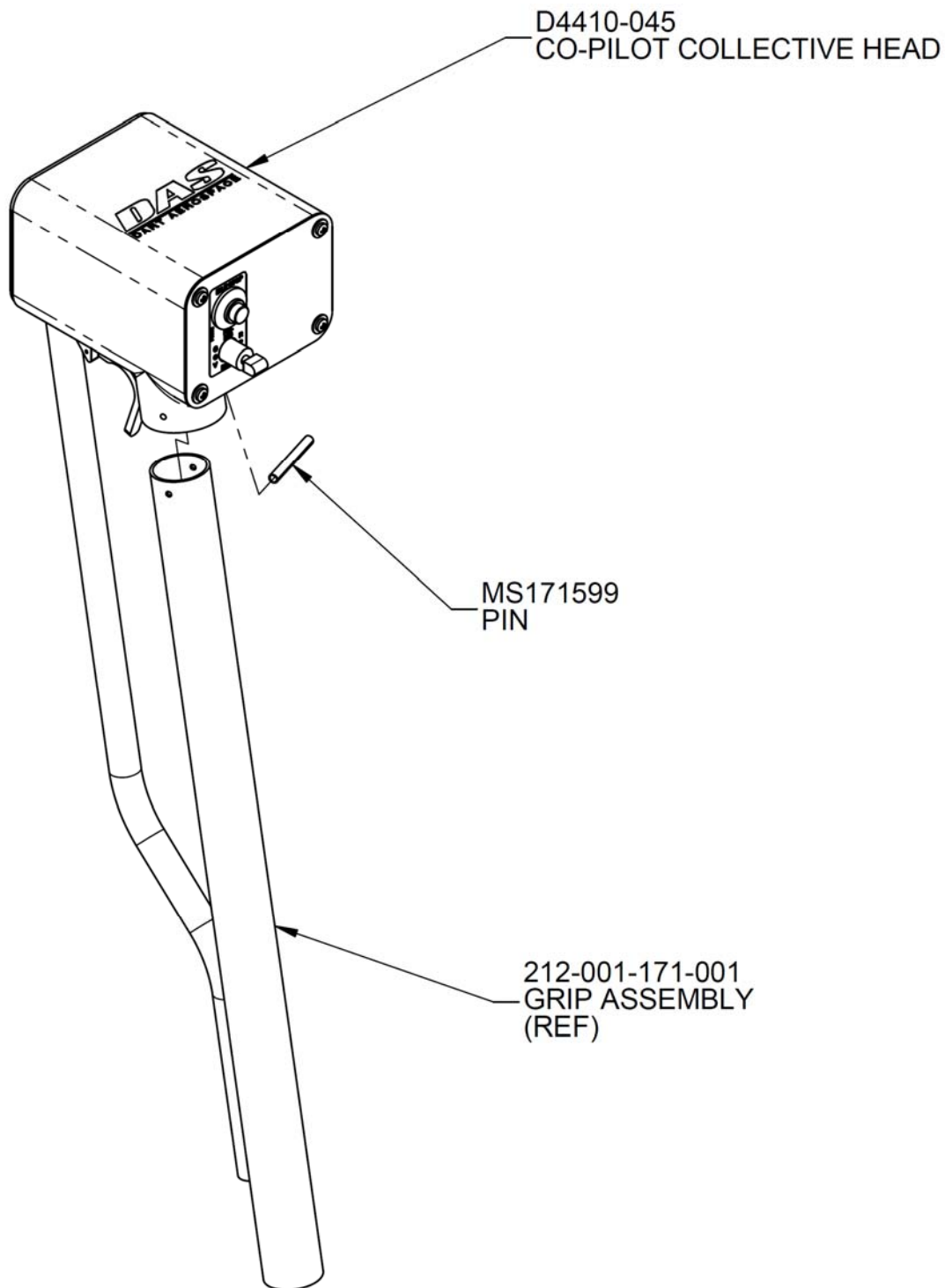


FIGURE 9: D212-803-019 Co-Pilot Collective Head Installation

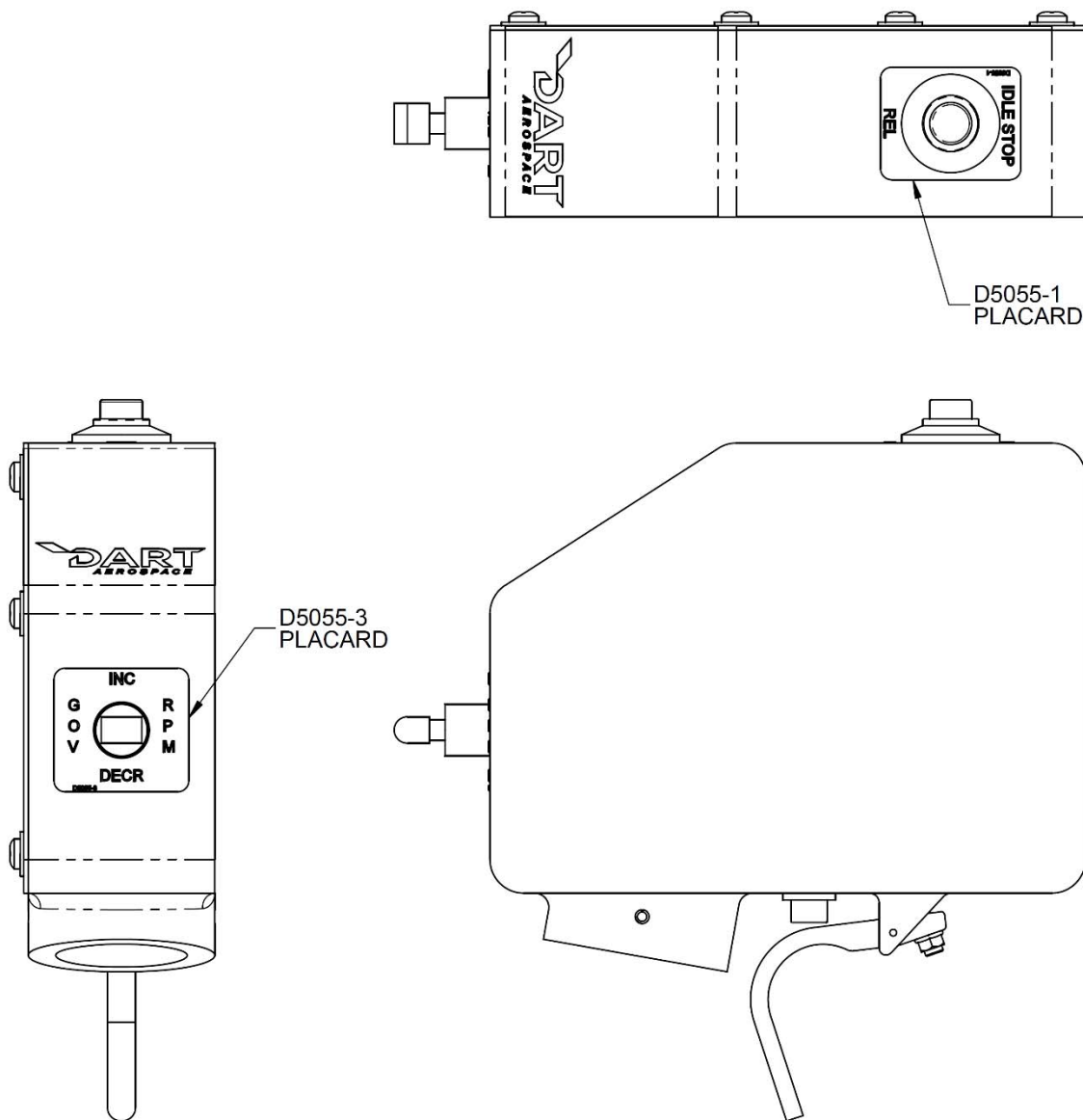


FIGURE 10: DXXX-803-111/-113/-119 Co-Pilot Collective Head Front View

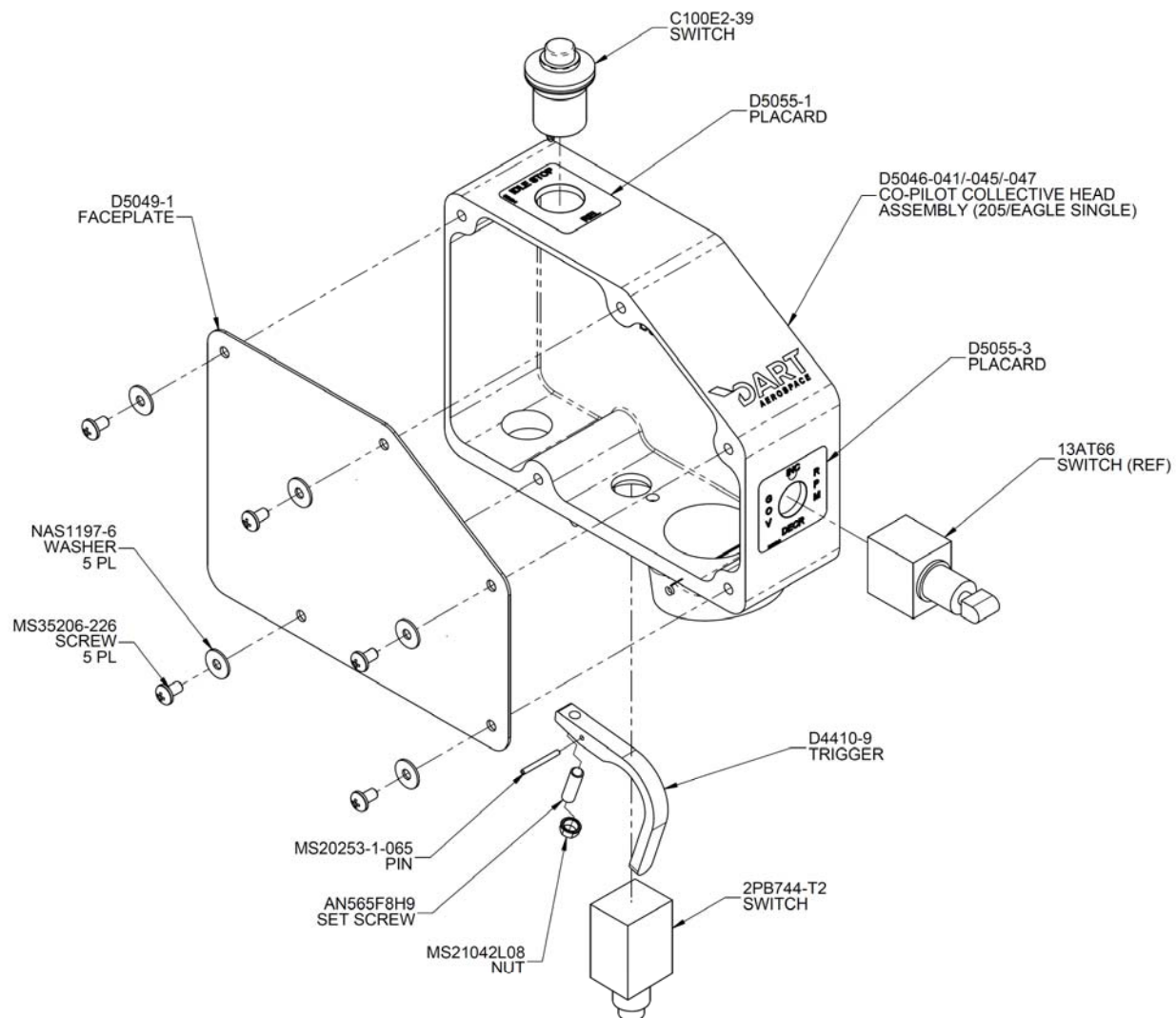


FIGURE 11: DXXX-803-111/-119/-121 Kit Switches Installation
(Wiring Conduit Tube Removed for Clarity)

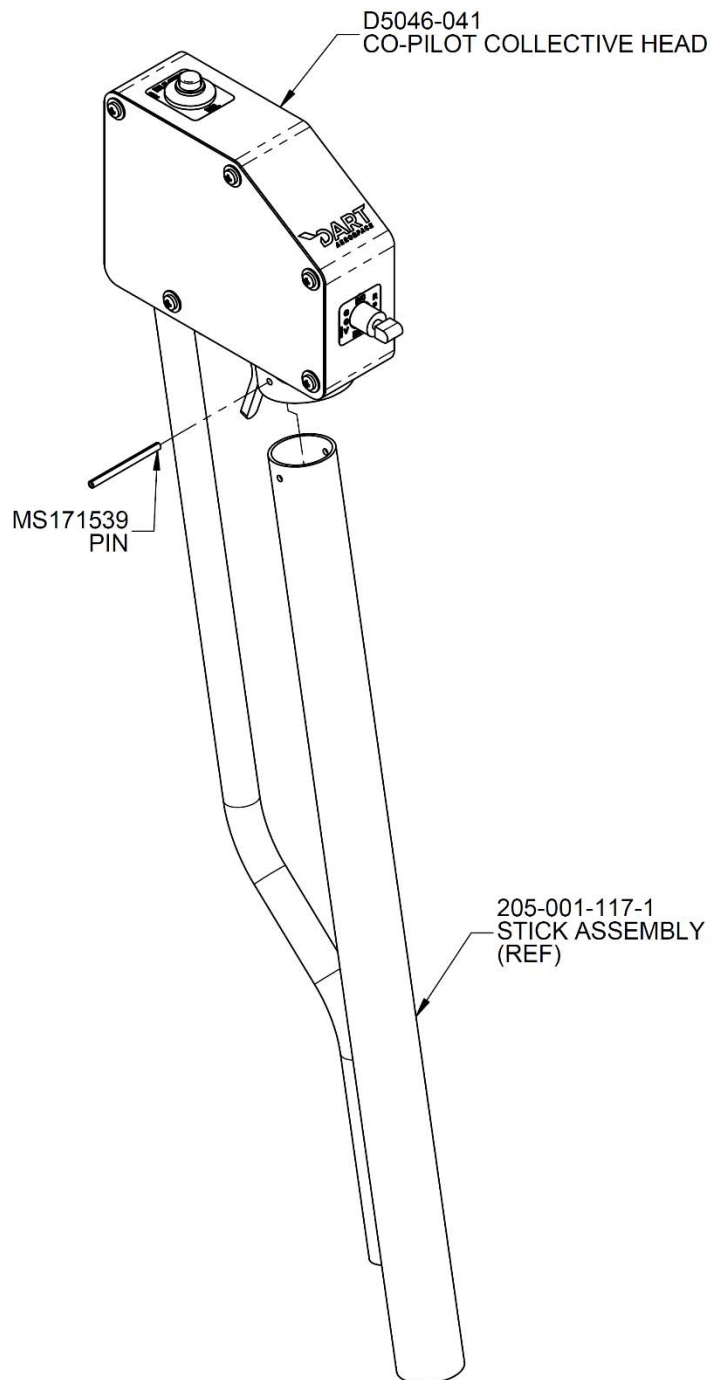


FIGURE 12: D205-803-111/-113 Co-Pilot Collective Head Installation

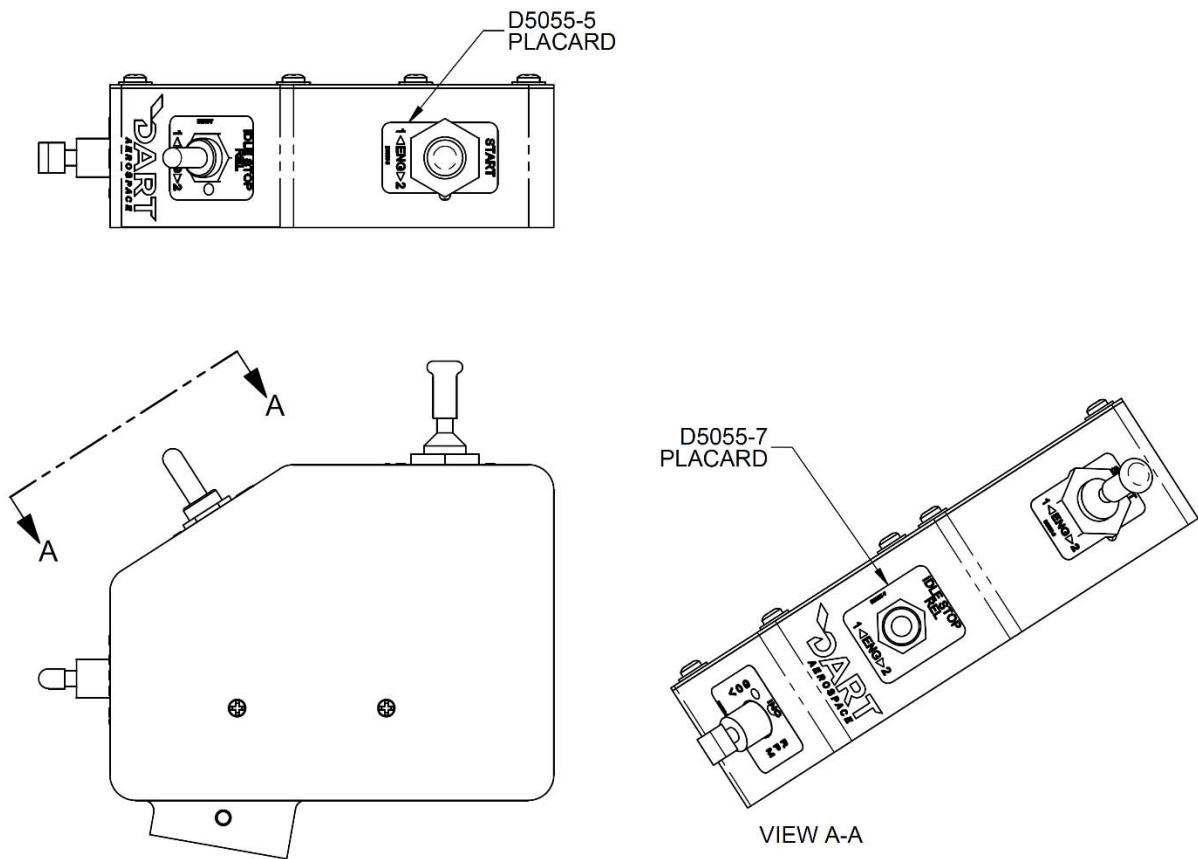


FIGURE 13: D212-803-115/-117 Co-Pilot Collective Head

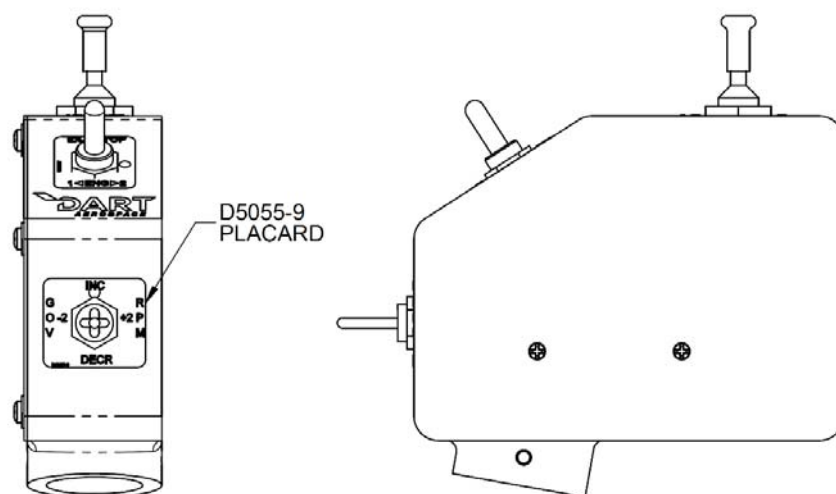


FIGURE 14: D212-803-115/-117 Co-Pilot Collective Head Front View
(aircraft modified by Bell TB 212-91-138 (212) or TB 412-93-118 (412) or is a Bell 412 S/N 36020 to 36086 and subsequent or is modified for improved hover performance with PT6T-3BE engines and 5 minute takeoff power rating (412-570-001-103))

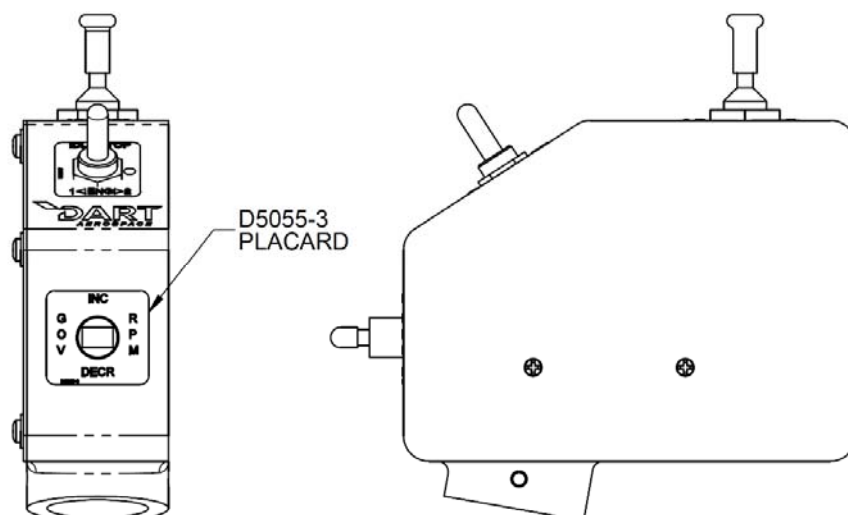


FIGURE 15: D212-803-115/-117 Co-Pilot Collective Head Front View
(other 212/412 aircraft)

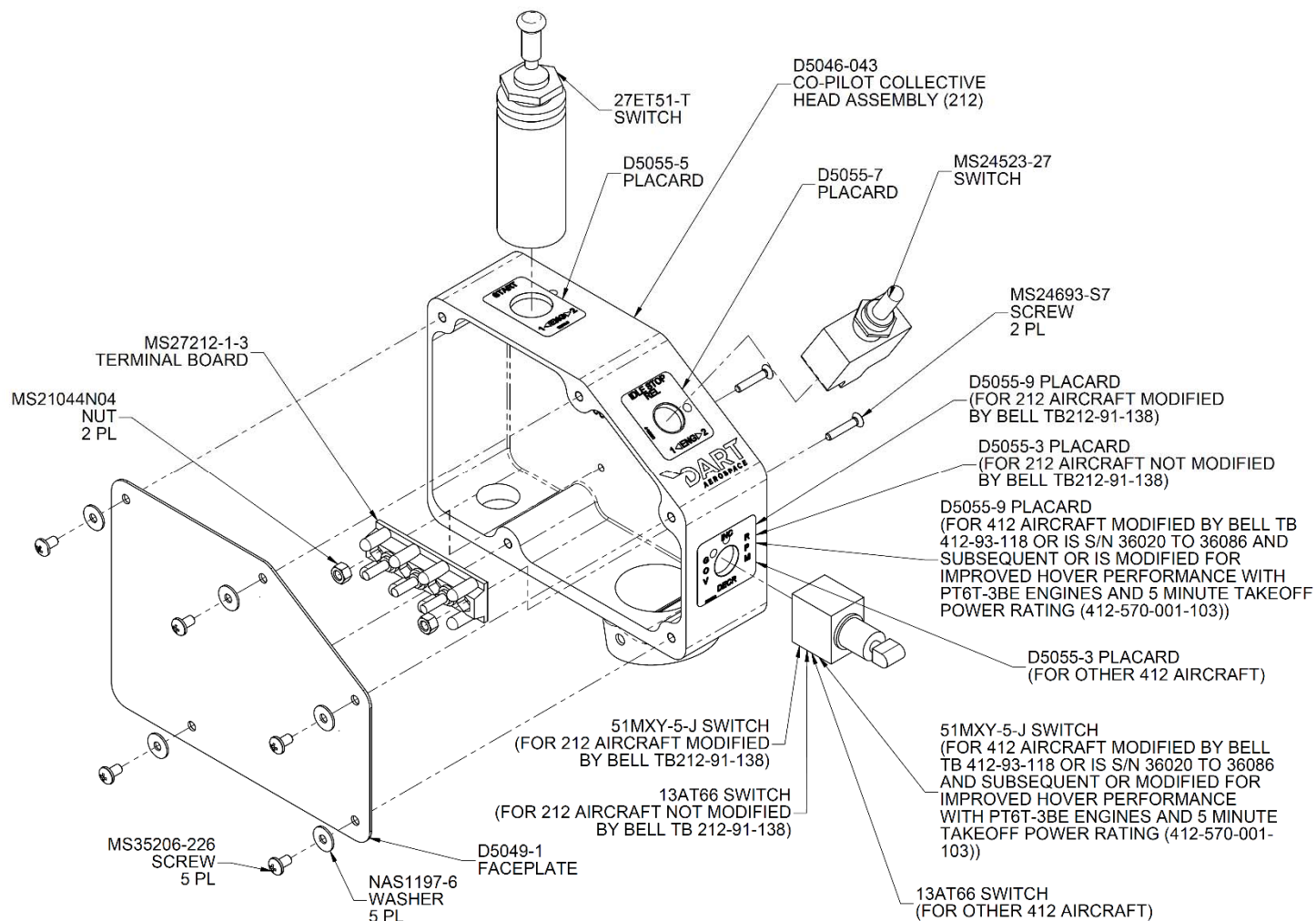


FIGURE 16: D212-803-115 Kit Switches Installation

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Revision: **D**

Date: 14.09.18

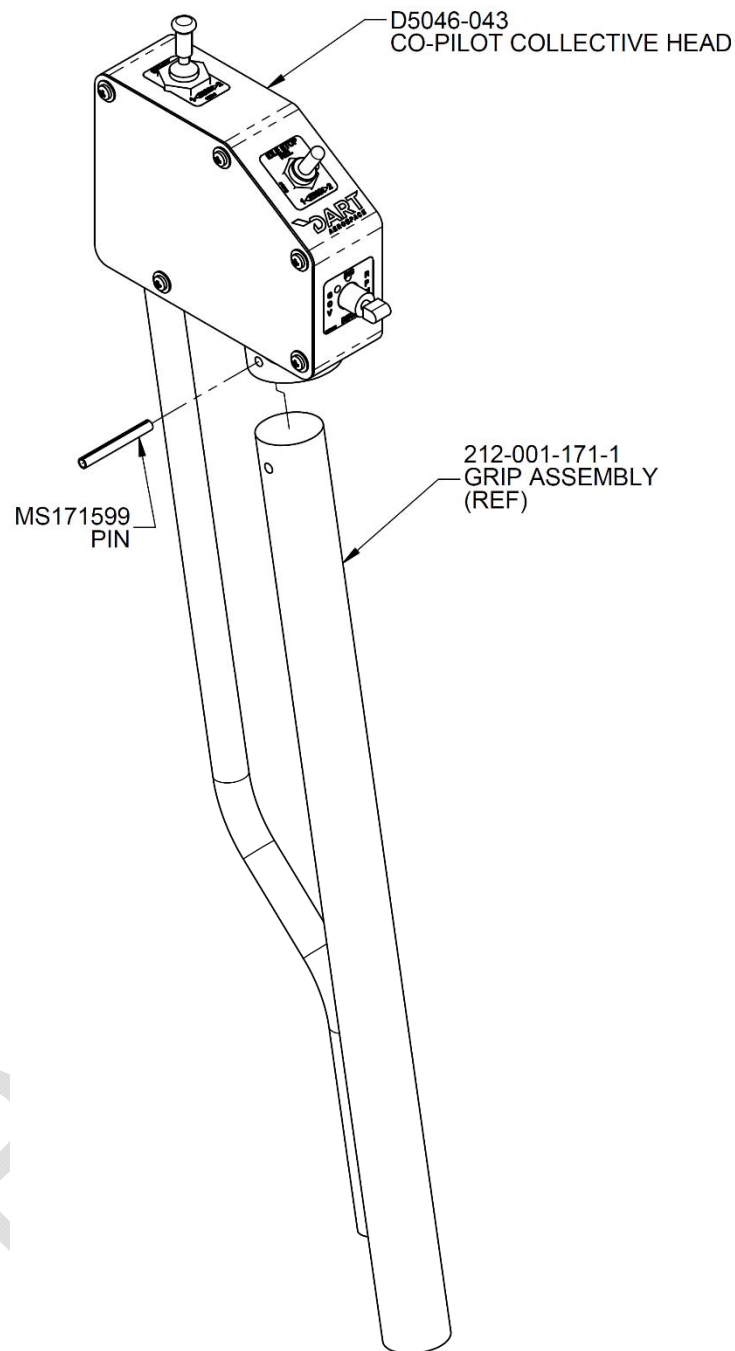


FIGURE 17: D212-803-115/-117 Co-Pilot Collective Head Installation

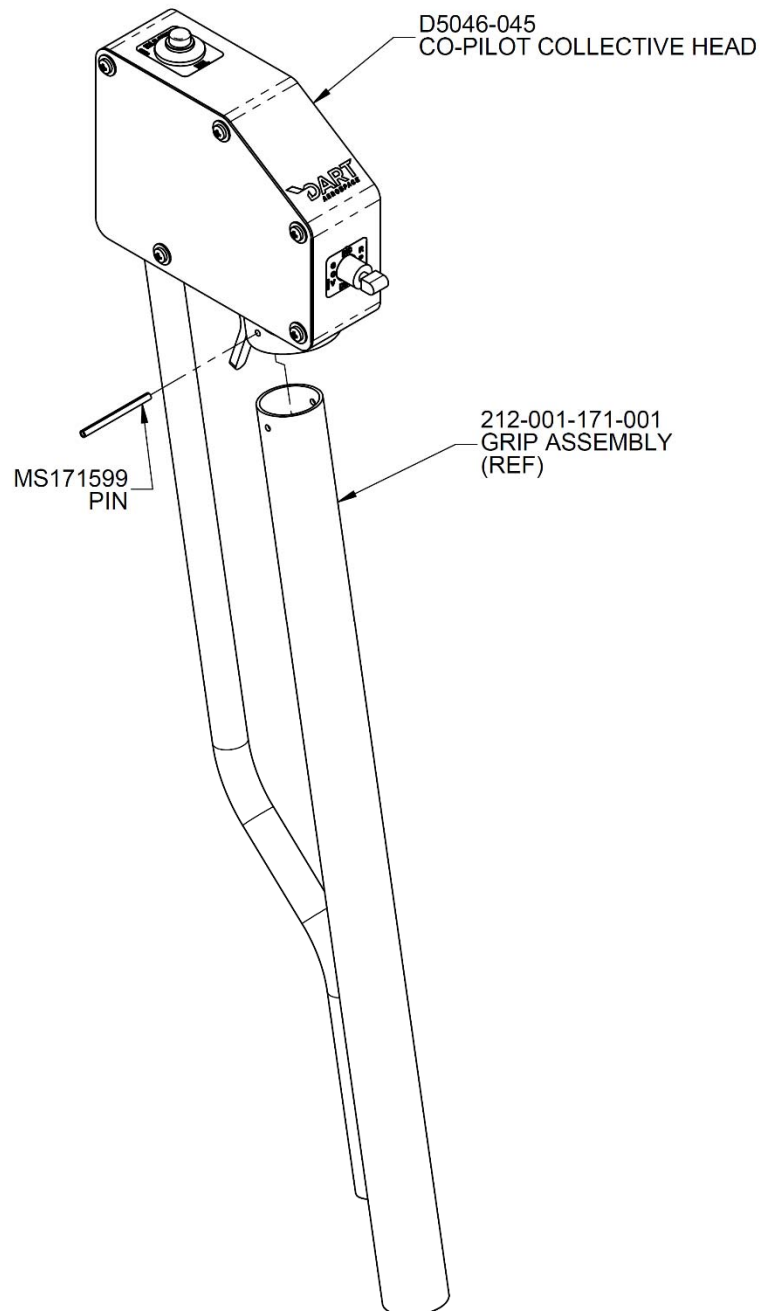


FIGURE 18: D212-803-119 Co-Pilot Collective Head Installation

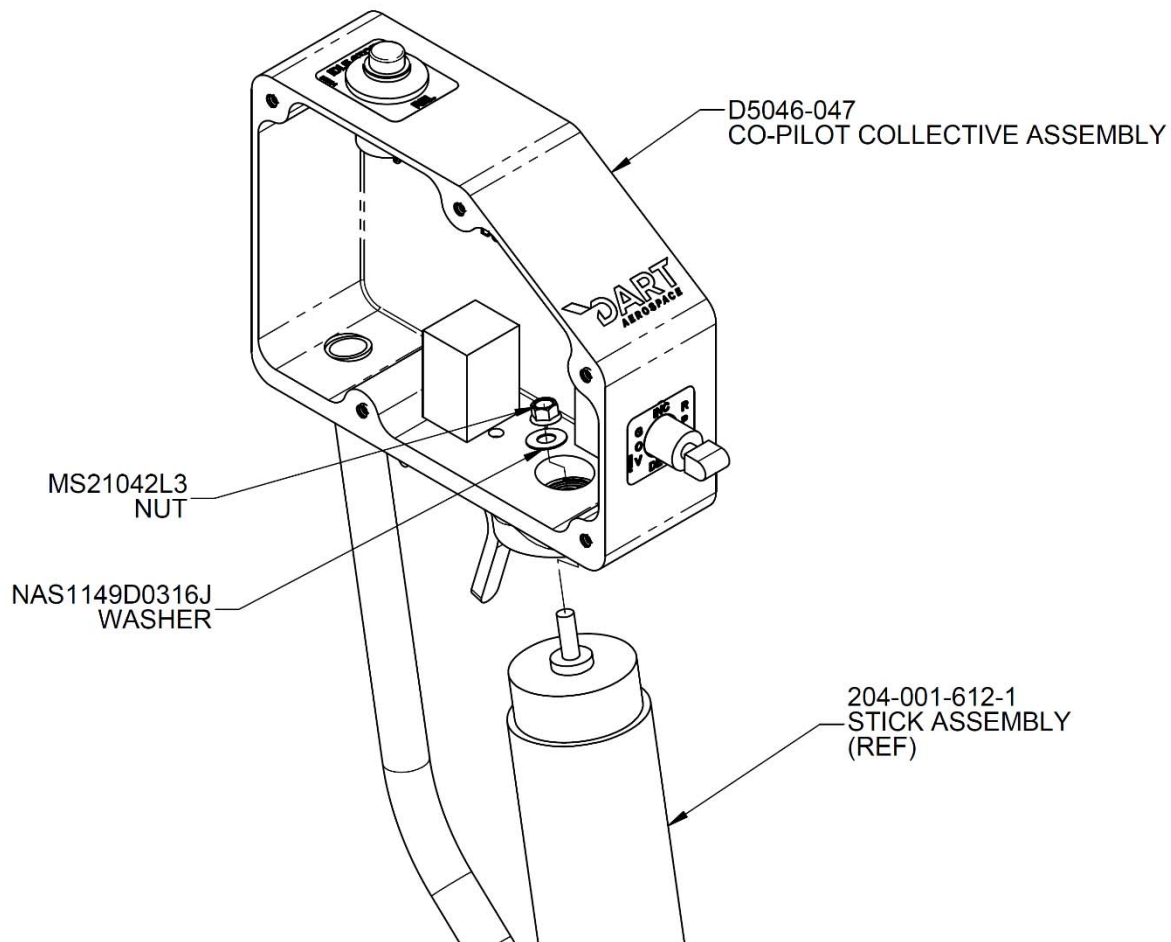


FIGURE 19: D205-803-121/-123 Co-Pilot Collective Head Installation

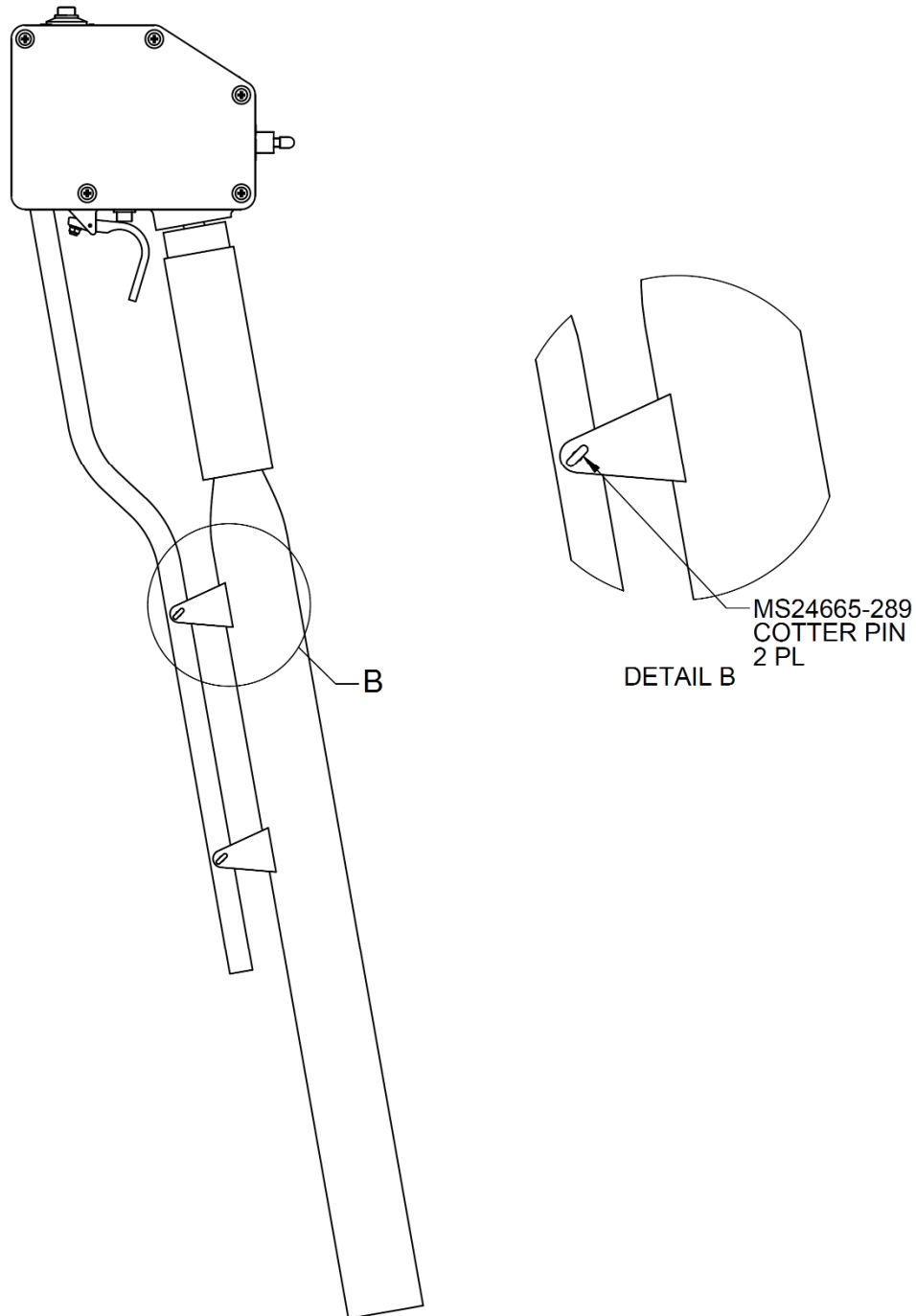


FIGURE 20: D205-803-121/-123 Co-Pilot Collective Head Installation

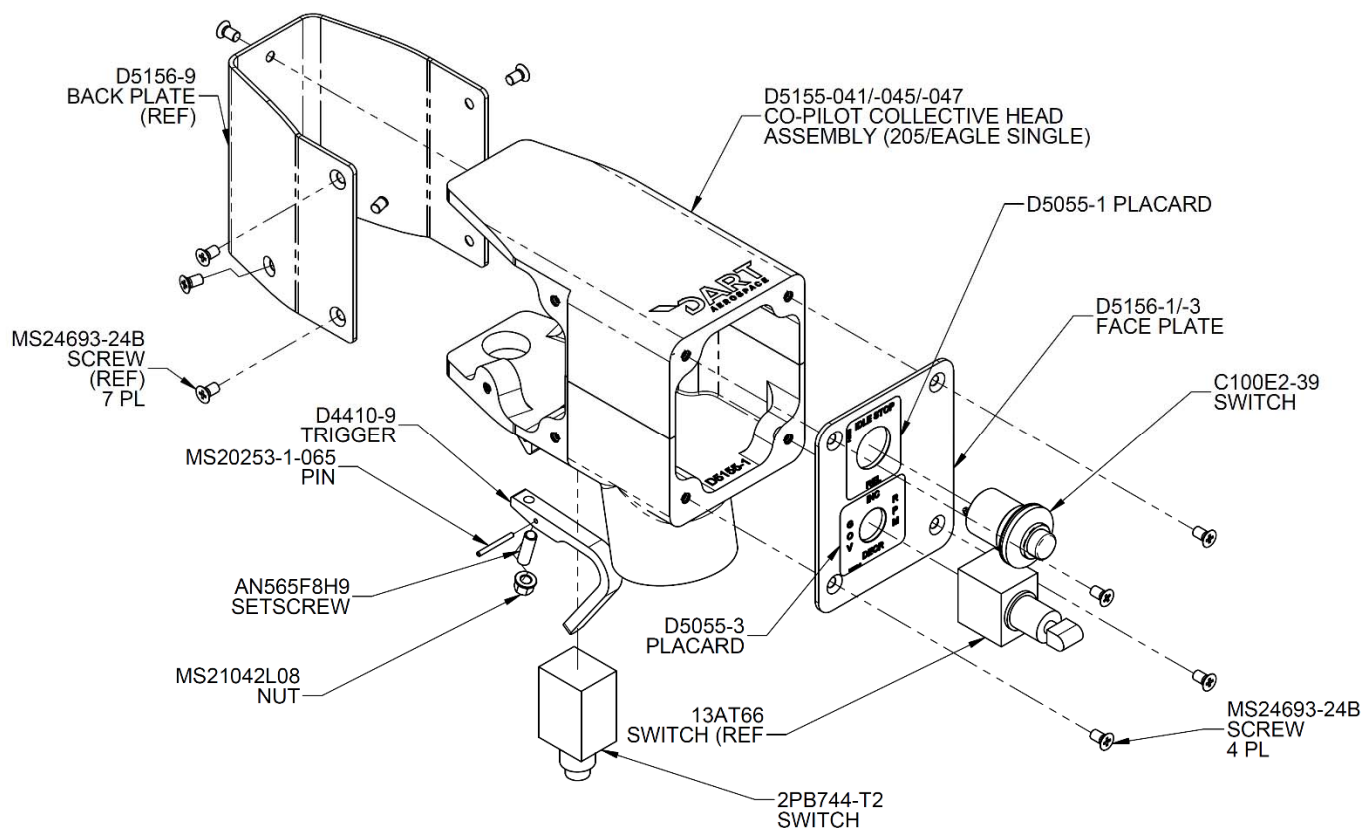


FIGURE 21: DXXX-803-211/-219/-221 Kit Switches Installation
(Wiring Conduit Tube Removed for Clarity)

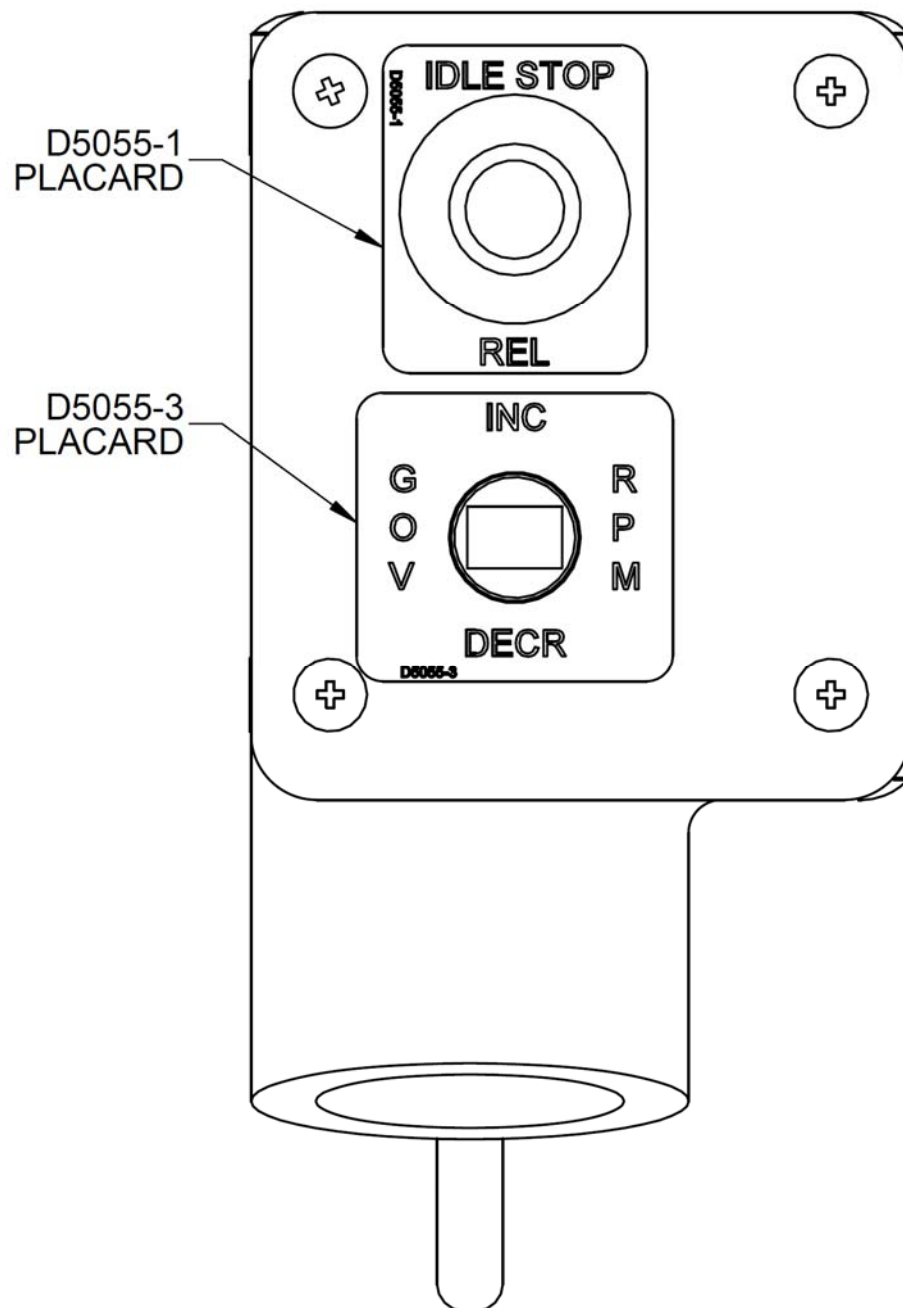


FIGURE 22: DXXX-803-211/-213/-219 Co-Pilot Collective Head Front View

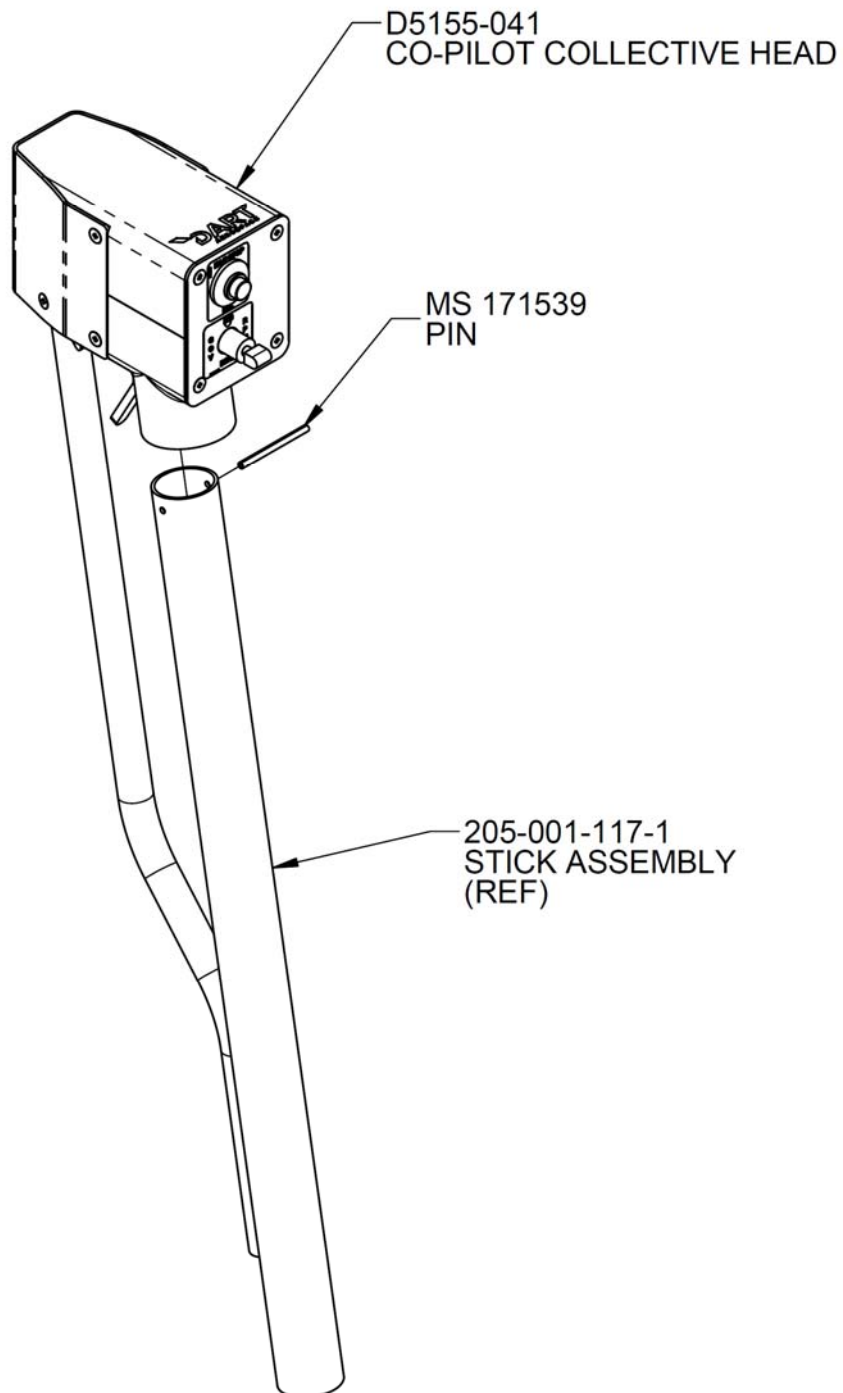


FIGURE 23: D205-803-211/-213 Co-Pilot Collective Head Installation

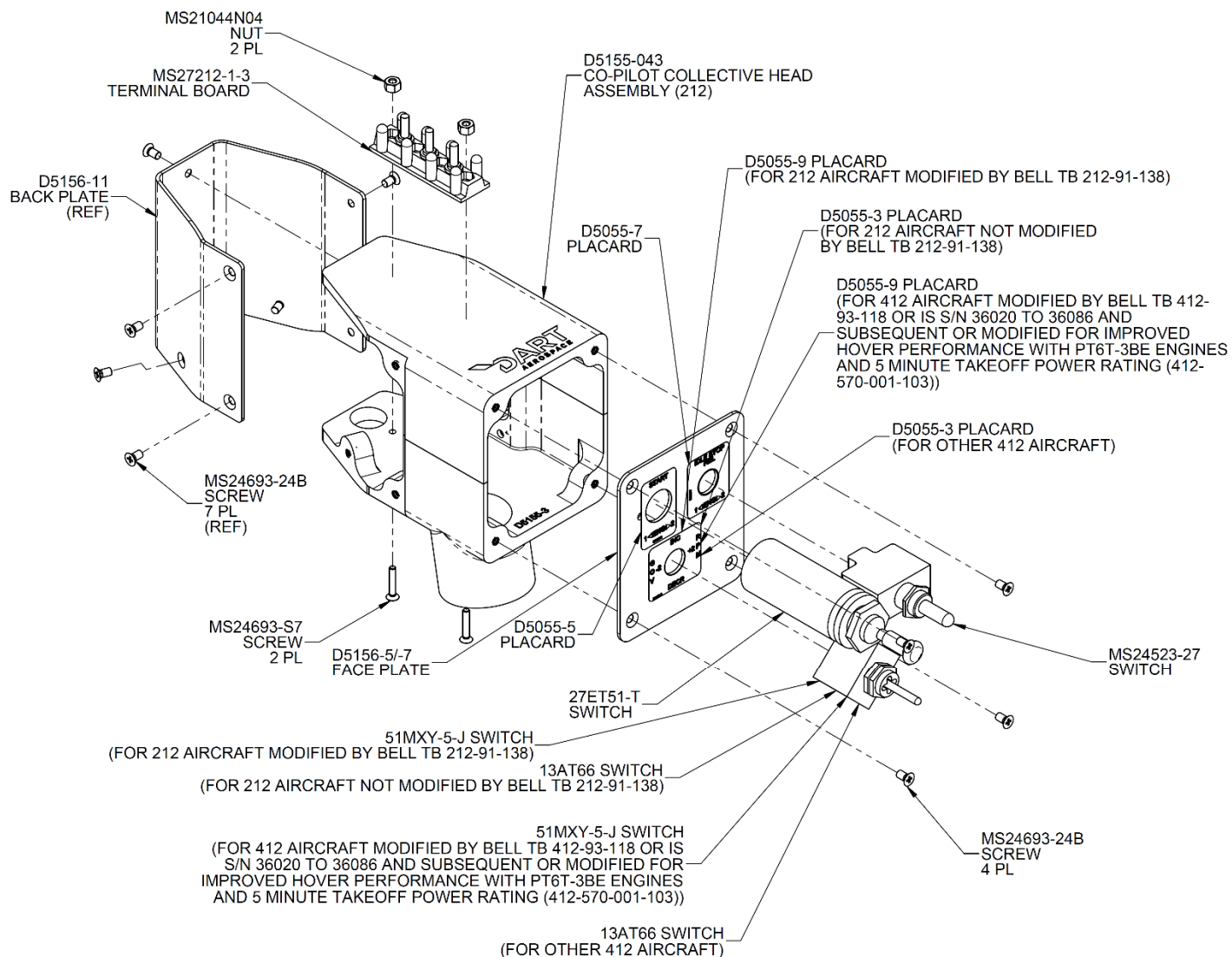


FIGURE 24: D212-803-215/-217 Co-Pilot Collective Head

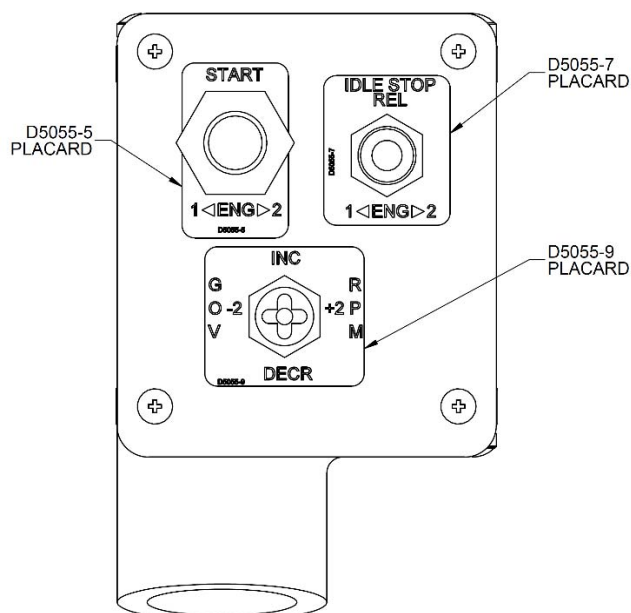


FIGURE 25: D212-803-215/-217 Co-Pilot Collective Head Front View
(aircraft modified by Bell TB 212-91-138 (212) or TB 412-93-118 (412) or is a Bell 412 S/N 36020 to 36086 and subsequent or is modified for improved hover performance with PT6T-3BE engines and 5 minute takeoff power rating (412-570-001-103))

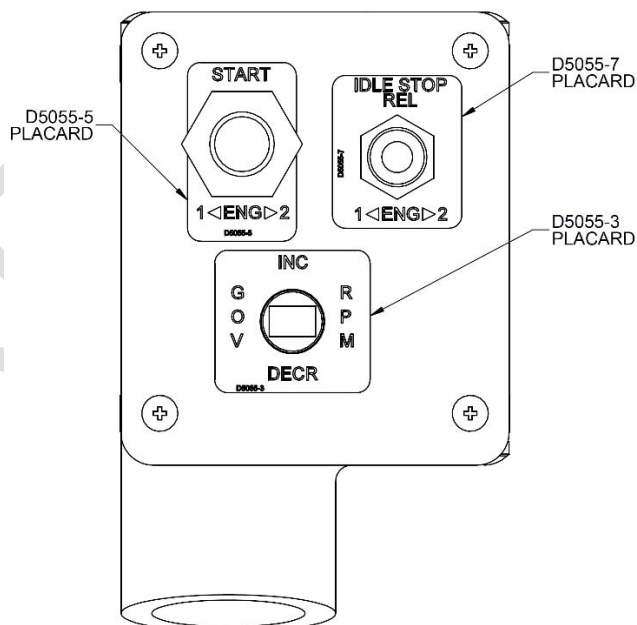


FIGURE 26: D212-803-215/-217 Co-Pilot Collective Head Front View
(for other 212/412 aircraft)

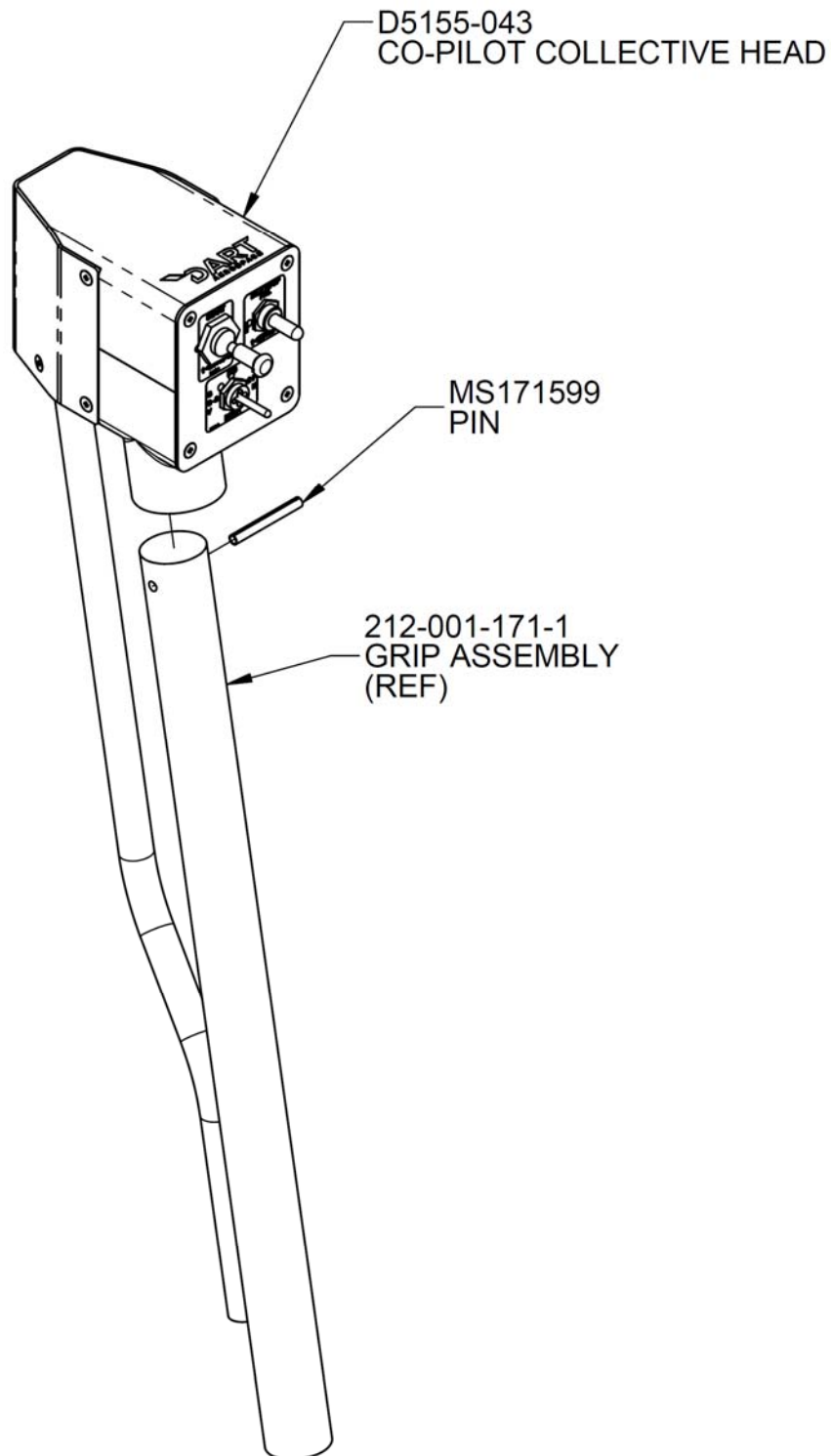


FIGURE 27: D212-803-215/-217 Co-Pilot Collective Head Installation

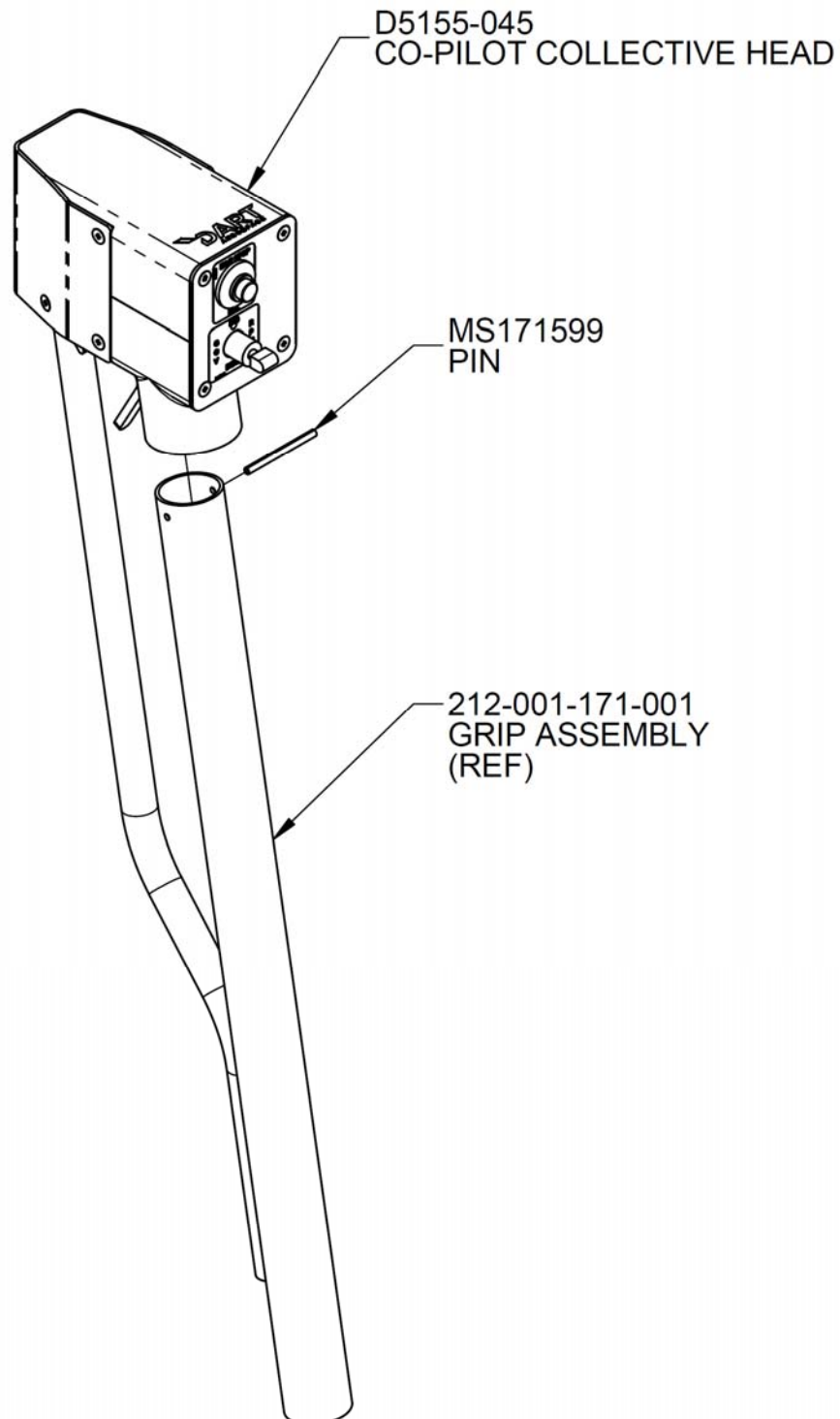


FIGURE 28: D212-803-219 Co-Pilot Collective Head Installation

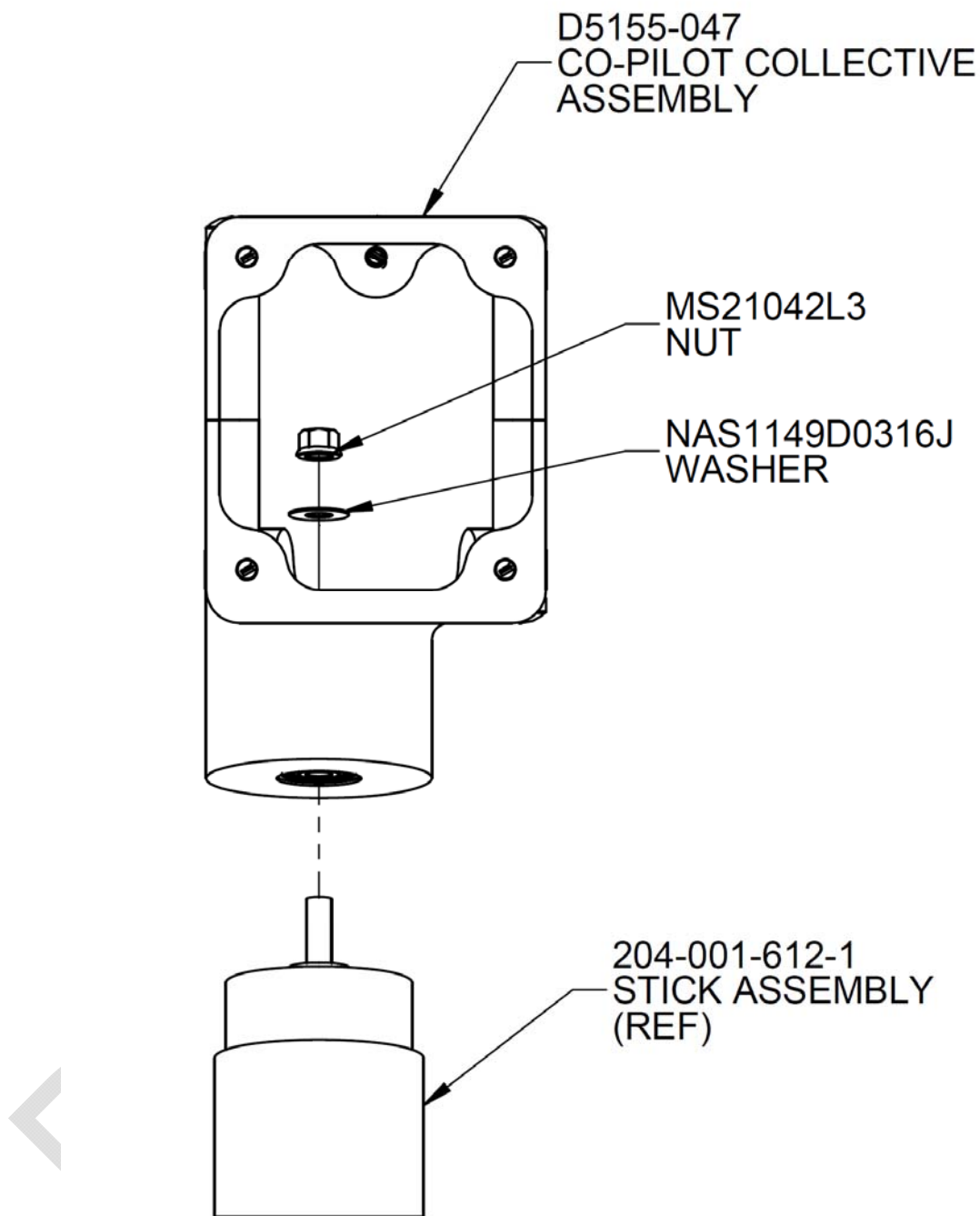


FIGURE 29: D205-803-221/-223 Co-Pilot Collective Head Installation

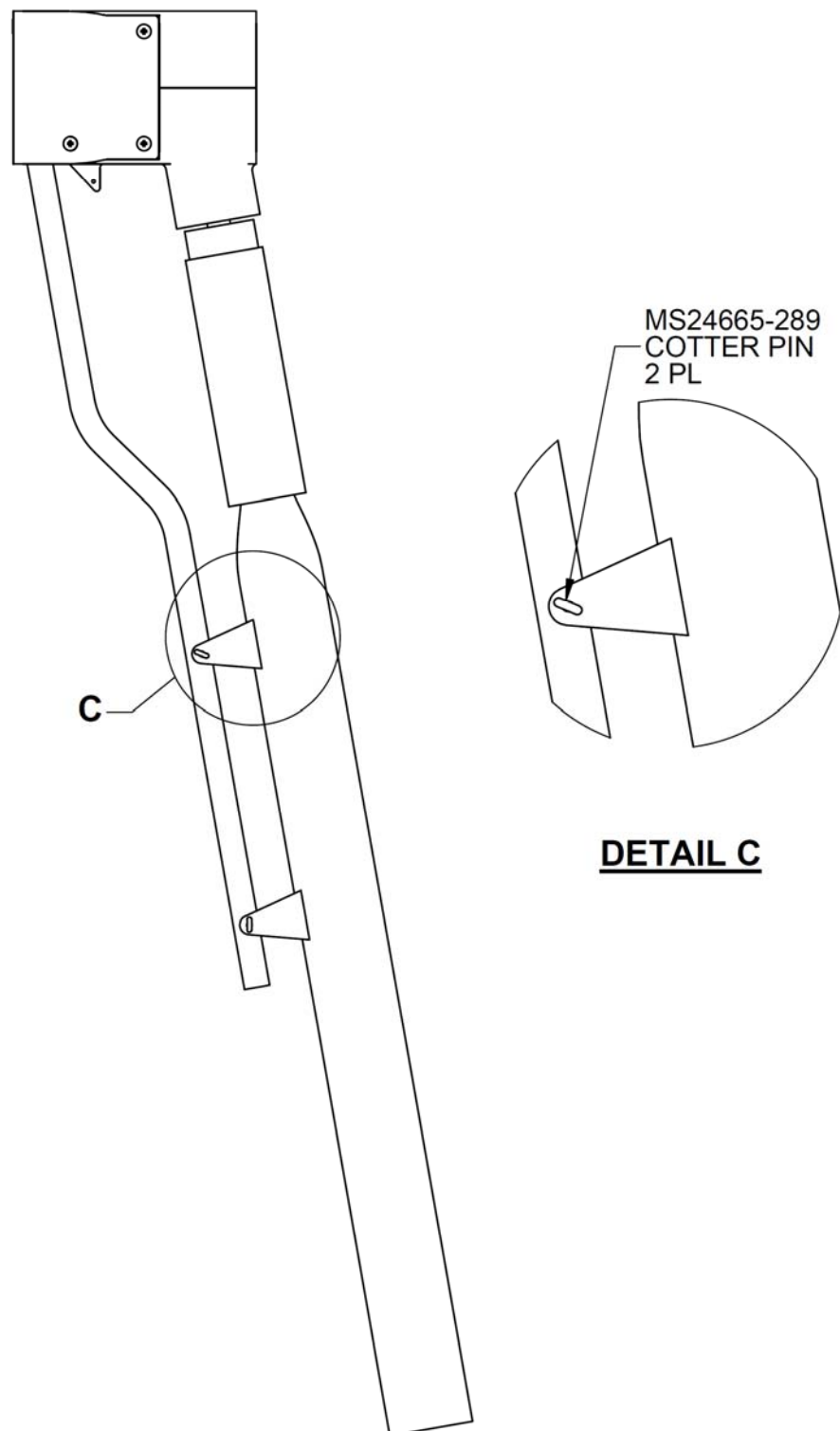


FIGURE 30: D205-803-221/-223 Co-Pilot Collective Head Installation

4. WEIGHT AND BALANCE

The following is the net weight increase associated with the D205-803/D212-803 Kits.

Installation	Weight	LATERAL		LONGITUDINAL	
		Arm	Moment	Arm	Moment
D205-803-011/013 <i>Left Hand Pilot in Command Kit Bell 205</i>	1.7 lb 0.77 kg	-32.5 in -0.83 m	-55.3 in-lb -0.64 m-k-g	32.0 in 0.81 m	54.4 in-lb 0.62 m-k-g
D212-803-015/017 <i>Left Hand Pilot in Command Kit Bell 212/412</i>	1.8 lb 0.82 kg	-32.5 in -0.83 m	-58.5 in-lb -0.68 m-k-g	32.0 in 0.81 m	57.6 in-lb 0.66 m-k-g
D212-803-019 <i>Left Hand Pilot in Command Kit Bell 212 modified per FAA STC SR02831NY / TC STC SH07-28</i>	1.7 lb 0.77 kg	-32.5 in -0.83 m	-55.3 in-lb -0.64 m-k-g	32.0 in 0.81 m	54.4 in-lb 0.62 m-k-g
D205-803-111/-113 <i>Left Hand Pilot in Command Kit Bell 205</i>	1.1 lb 0.50 kg	-32.5 in -0.83 m	-35.8 in-lb -0.42 m-k-g	32.0 in 0.81 m	35.2 in-lb 0.40 m-k-g
D212-803-115/-117 <i>Left Hand Pilot in Command Kit Bell 212/412</i>	1.2 lb 0.54 kg	-32.5 in -0.83 m	-39.0 in-lb -0.45 m-k-g	32.0 in 0.81 m	38.4 in-lb 0.44 m-k-g
D212-803-119 <i>Left Hand Pilot in Command Kit Bell 212 modified per FAA STC SR02831NY / TC STC SH07-28</i>	1.1 lb 0.50 kg	-32.5 in -0.83 m	-35.8 in-lb -0.42 m-k-g	32.0 in 0.81 m	35.2 in-lb 0.40 m-k-g
D205-803-121/-123 <i>Left Hand Pilot in Command Kit Bell 205 with 204-001-290-5 Stick and Throttle Assy installed</i>	1.1 lb 0.50 kg	-32.5 in -0.83 m	-35.8 in-lb -0.42 m-k-g	32.0 in 0.81 m	35.2 in-lb 0.40 m-k-g
D205-803-211/-213 <i>Left Hand Pilot in Command Kit Bell 205</i>	1.2 lb 0.54 kg	-32.5 in -0.83 m	-39.0 in-lb -0.45 m-k-g	32.0 in 0.81 m	38.4 in-lb 0.44 m-k-g
D212-803-215/-217 <i>Left Hand Pilot in Command Kit Bell 212/412</i>	1.5 lb 0.68 kg	-32.5 in -0.83 m	-48.8 in-lb -0.56 m-k-g	32.0 in 0.81 m	48.0 in-lb 0.55 m-k-g
D212-803-219 <i>Left Hand Pilot in Command Kit Bell 212 modified per FAA STC SR02831NY / TC STC SH07-28</i>	1.2 lb 0.54 kg	-32.5 in -0.83 m	-39.0 in-lb -0.45 m-k-g	32.0 in 0.81 m	38.4 in-lb 0.44 m-k-g
D205-803-221/-223 <i>Left Hand Pilot in Command Kit Bell 205 with 204-001-290-5 Stick and Throttle Assy installed</i>	1.4 lb 0.63 kg	-32.5 in -0.83 m	-45.5 in-lb -0.52 m-k-g	32.0 in 0.81 m	44.8 in-lb 0.51 m-k-g

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Date: 14.09.18

5. PARTS LIST – LARGE COLLECTIVE HEAD KITS

Qty -011	Qty -013	Qty -015	Qty -017	Qty -019	Part Number	Description
X					D205-803-011	LEFT HAND PILOT IN COMMAND, COMPLETE KIT
	X				D205-803-013	LEFT HAND PILOT IN COMMAND, MECHANICAL ONLY
		X			D212-803-015	LEFT HAND PILOT IN COMMAND, COMPLETE KIT
			X		D212-803-017	LEFT HAND PILOT IN COMMAND, MECHANICAL ONLY
				X	D212-803-019	LEFT HAND PILOT IN COMMAND, EAGLE SINGLE
1	1				D4410-041	CO-PILOT COLLECTIVE HEAD ASSEMBLY (205)
		1	1		D4410-043	CO-PILOT COLLECTIVE HEAD ASSEMBLY (212)
				1	D4410-045	CO-PILOT COLLECTIVE HEAD ASSEMBLY (EAGLE SINGLE)
1	1			1	D4410-3	FACE PLATE
		1	1		D4410-5	FACE PLATE
1	1			1	D4410-9	TRIGGER
1	1			1	D4411-1	PLACARD
		1	1		D4411-3	PLACARD
		1	1		D4411-5	PLACARD
1	1	1	1	1	D4411-7	PLACARD
		1	1		D4413-1	DOME PLUG
		1			27ET51-T	SWITCH (ALT P/N 212-075-153-3)
1					2PB744-T2	SWITCH
		3			30-037-26	DIODE ASSEMBLY
		2			30-037-3	DIODE ASSEMBLY
1	1			1	AN565F8H9	SETSCREW
		3			AN961-6T	WASHER
		1			51MXY-5-J	SWITCH
1					C100E2-39	SWITCH
17		AR (21)			M39029/31-240	PIN
17		AR (21)			M39029/32-259	SOCKET
		AR (2)			M39029/31-228	PIN
		AR (2)			M39029/32-247	SOCKET
1	1			1	MS20253-1-065	PIN
		3			MS21042L06	NUT
1	1			1	MS21042L08	NUT
1	1	1	1	1	MS21042L3	NUT
		2			MS21044N04	NUT
1	1	1	1	1	MS21919WDG10	CLAMP
		1	1	1	MS21919WDG19	CLAMP
1	1				MS21919WDG20	CLAMP
		1			MS24523-27	SWITCH
		2			MS24693-S7	SCREW
1	1	1	1	1	MS27039-1-07	SCREW
		1			MS27212-1-3	TERMINAL BOARD
1					MS3126E14-19P	PLUG
1					MS3120E14-19S	SOCKET
		2			MS3126E16-99P	PLUG
		1			MS3120E16-99S	SOCKET
		3			MS3373-A1	STRIP
4	4	4	4	4	MS35206-226	SCREW
2	2	2	2	2	NAS1149D0363J	WASHER
4	4	4	4	4	NAS1197-6	WASHER
1	1	1	1	1	D212-803	KIT PAPERWORK

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6. PARTS LIST – SMALL COLLECTIVE HEAD KITS

Qty -111	Qty -113	Qty -115	Qty -117	Qty -119	Qty -121	Qty -123	Part Number	Description
X							D205-803-111	LEFT HAND PILOT IN COMMAND, COMPLETE KIT
	X						D205-803-113	LEFT HAND PILOT IN COMMAND, MECHANICAL ONLY
		X					D212-803-115	LEFT HAND PILOT IN COMMAND, COMPLETE KIT
			X				D212-803-117	LEFT HAND PILOT IN COMMAND, MECHANICAL ONLY
				X			D212-803-119	LEFT HAND PILOT IN COMMAND, EAGLE SINGLE
					X		D205-803-121	LEFT HAND PILOT IN COMMAND, COMPLETE KIT
						X	D205-803-123	LEFT HAND PILOT IN COMMAND, MECHANICAL ONLY
1	1						D5046-041	CO-PILOT COLLECTIVE HEAD ASSEMBLY (205)
		1	1				D5046-043	CO-PILOT COLLECTIVE HEAD ASSEMBLY (212)
				1			D5046-045	CO-PILOT COLLECTIVE HEAD ASSEMBLY (EAGLE SINGLE)
					1	1	D5046-047	CO-PILOT COLLECTIVE HEAD ASSEMBLY (205 WITH THE 204-001-290-5 STICK AND THROTTLE ASSY INSTALLED)
1	1	1	1	1	1	1	D5049-1	FACE PLATE
1	1			1	1	1	D4410-9	TRIGGER
1	1			1	1	1	D5055-1	PLACARD
1	1	1	1	1	1	1	D5055-3	PLACARD
		1	1				D5055-5	PLACARD
		1	1				D5055-7	PLACARD
		1	1				D5055-9	PLACARD
1	1	1	1	1			D4411-7	PLACARD
		1					27ET51-T	SWITCH (ALT P/N 212-075-153-3)
1					1		2PB744-T2	SWITCH
		3					30-037-26	DIODE ASSEMBLY
		2					30-037-3	DIODE ASSEMBLY
1	1			1	1	1	AN565F8H9	SETSCREW
		3					AN961-6T	WASHER
		1					51MXY-5-J	SWITCH
1					1		C100E2-39	SWITCH
17		AR (21)			17		M39029/31-240	PIN
17		AR (21)			17		M39029/32-259	SOCKET
		AR (2)					M39029/31-228	PIN
		AR (2)					M39029/32-247	SOCKET
1	1			1	1	1	MS20253-1-065	PIN
		3					MS21042L06	NUT
1	1			1	1	1	MS21042L08	NUT
1	1	1	1	1	1	1	MS21042L3	NUT
		2					MS21044N04	NUT
1	1	1	1	1			MS21919WDG10	CLAMP
		1	1	1			MS21919WDG19	CLAMP
1	1						MS21919WDG20	CLAMP
		1					MS24523-27	SWITCH
		2					MS24693-S7	SCREW
1	1	1	1	1	1	1	MS27039-1-07	SCREW
		1					MS27212-1-3	TERMINAL BOARD
1					1		MS3126E14-19P	PLUG
1					1		MS3120E14-19S	SOCKET
		2					MS3126E16-99P	PLUG
		1					MS3120E16-99S	SOCKET
		3					MS3373-A1	STRIP
5	5	5	5	5	5	5	MS35206-226	SCREW
2	2	2	2	2			NAS1149D0363J	WASHER
5	5	5	5	5	5	5	NAS1197-6	WASHER
					2	2	MS24665-289	COTTER PIN
1	1	1	1	1	1	1	D212-803	KIT PAPERWORK

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7. PARTS LIST – MEDIUM COLLECTIVE HEAD KITS

Qty -211	Qty -213	Qty -215	Qty -217	Qty -219	Qty -221	Qty -223	Part Number	Description
X							D205-803-211	LEFT HAND PILOT IN COMMAND, COMPLETE KIT
	X						D205-803-213	LEFT HAND PILOT IN COMMAND, MECHANICAL ONLY
		X					D212-803-215	LEFT HAND PILOT IN COMMAND, COMPLETE KIT
			X				D212-803-217	LEFT HAND PILOT IN COMMAND, MECHANICAL ONLY
				X			D212-803-219	LEFT HAND PILOT IN COMMAND, EAGLE SINGLE
					X		D205-803-221	LEFT HAND PILOT IN COMMAND, COMPLETE KIT
						X	D205-803-223	LEFT HAND PILOT IN COMMAND, MECHANICAL ONLY
1	1						D5155-041	CO-PILOT COLLECTIVE HEAD ASSEMBLY (205)
		1	1				D5155-043	CO-PILOT COLLECTIVE HEAD ASSEMBLY (212)
				1			D5155-045	CO-PILOT COLLECTIVE HEAD ASSEMBLY (EAGLE SINGLE)
					1	1	D5155-047	CO-PILOT COLLECTIVE HEAD ASSEMBLY (205 WITH THE 204-001-290-5 STICK AND THROTTLE ASSY INSTALLED)
1	1			1	1	1	D5156-1	FACE PLATE
1	1			1	1	1	D5156-3	FACE PLATE
		1	1				D5156-5	FACE PLATE
		1	1				D5156-7	FACE PLATE
1	1			1	1	1	D4410-9	TRIGGER
1	1			1	1	1	D5055-1	PLACARD
1	1	1	1	1	1	1	D5055-3	PLACARD
		1	1				D5055-5	PLACARD
		1	1				D5055-7	PLACARD
		1	1				D5055-9	PLACARD
1	1	1	1	1			D4411-7	PLACARD
		1					27ET51-T	SWITCH (ALT P/N 212-075-153-3)
1					1		2PB744-T2	SWITCH
		3					30-037-26	DIODE ASSEMBLY
		2					30-037-3	DIODE ASSEMBLY
1	1			1	1	1	AN565F8H9	SETSCREW
		3					AN961-6T	WASHER
		1					51MXY-5-J	SWITCH
1					1		C100E2-39	SWITCH
17		AR (21)			17		M39029/31-240	PIN
17		AR (21)			17		M39029/32-259	SOCKET
		AR (2)					M39029/31-228	PIN
		AR (2)					M39029/32-247	SOCKET
1	1			1	1	1	MS20253-1-065	PIN
		3					MS21042L06	NUT
1	1			1	1	1	MS21042L08	NUT
1	1	1	1	1	1	1	MS21042L3	NUT
		2					MS21044N04	NUT
1	1	1	1	1			MS21919WDG10	CLAMP
		1	1	1			MS21919WDG19	CLAMP
1	1						MS21919WDG20	CLAMP
		1					MS24523-27	SWITCH
		2					MS24693-S7	SCREW
4	4	4	4	4	4	4	MS24693-24B	SCREW
1	1	1	1	1	1	1	MS27039-1-07	SCREW
		1					MS27212-1-3	TERMINAL BOARD
1					1		MS3126E14-19P	PLUG
1					1		MS3120E14-19S	SOCKET
		2					MS3126E16-99P	PLUG
		1					MS3120E16-99S	SOCKET
		3					MS3373-A1	STRIP
2	2	2	2	2			NAS1149D0363J	WASHER
					2	2	MS24665-289	COTTER PIN
1	1	1	1	1	1	1	D212-803	KIT PAPERWORK

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